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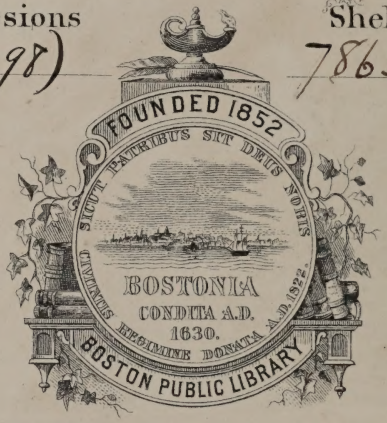

Received Jan. 14, 1892

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BOSTON.

SANTA RITA

LAND AND MINING COMPANY.

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PROSPECTUS AND REPORTS

OF THE

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PROPERTY OF THE

SANTA RITA

LAND AND MINING COMPANY,

LOCATED IN

PIMA COUNTY, ARIZONA TERRITORY.

1881.

J. E. SIMONDS, PRINTER, 50 BROMFIELD STREET,
BOSTON, MASS.

B.H.
(87098)
Jan. 14, 1892

SANTA RITA

LAND AND MINING CO.

DIRECTORS:

PLINY NICKERSON,
A. B. LAWRIE,
ARTHUR SEWALL,
C. P. SYKES,
GEO. H. QUINCY,
GEO. B. WILBUR,
S. S. SLEEPER.

FINANCIAL AGENTS:

C. H. VENNER & CO., BANKERS,

52 DEVONSHIRE STREET, BOSTON.

THE SANTA RITA

PRESENTED BY
THOMAS MINNS.
BOSTON.

LAND AND MINING COMPANY.

CIRCULAR No. 1.

THE SANTA RITA LAND AND MINING CO.

CIRCULAR No. 1.

The property of the Santa Rita Land and Mining Company is located in the Santa Cruz Valley, Pima County, Arizona, in close proximity to the growing Town of Calabasas, and consists of the land grants of Calabasas and Tumacacori, containing some 51,000 acres, and the mines of San Xavier, Western Extension of San Xavier, Buena Vista, Patterson, Arizona King, Arizona Queen, Democrat, Veta, Banner, Warsaw, Spondulix and the Gold Mountain Tunnel; also, one twenty ton furnace with thirty horse-power engine, diamond drill, and all machinery, tools, houses, etc., necessary for a complete mining outfit; and in addition the Company owns one thousand lots in the Town of Calabasas.

The title to these important properties rests under the mining laws of the United States, as well as, in the case of the Calabasas and Tumacacori land grants and town site, under Spanish grants confirmed by Mexican laws, the validity of which is approved after full investigation by able lawyers accustomed to the examination and prosecution of Mexican land grant claims and mining titles.

It is now certain that the Sonora Railroad will be built up the Magdalena Valley and reach the northern border of Mexico in the Santa Cruz Valley, within a few miles of Calabasas. The Atchison, Topeka and Santa Fe has made a connection with the Southern Pacific at Deming, and will in all probability be extended to a connection with the Sonora road. The Arizona Southern will probably be built during the year 1882 from Tucson to connect with the Sonora road in the Santa Cruz Valley. It is now expected that these roads, making connections with Guaymas, Calabasas and Tucson, will all be completed within the year 1882.

The location of this property is most favorable, combining the advantages of direct railroad connection North, South, East and West, assuring cheap transportation with a reasonable certainty of building up a town of great commercial importance to that section of country.

These grants covering 51,000 acres are regarded as the most valuable tracts in Arizona, considering the advantageous location, excellent railroad facilities, agricultural and pastoral resources, and a climate which for its marvelous salubrity has no equal in America.

The Santa Cruz River which runs directly through the property furnishes an unfailing supply of water, sufficient with proper management for all irrigating purposes.

The lands of the Company consists of 10,000 acres of the richest agricultural lands, and 41,000 acres of the best grazing lands in Arizona.

The agricultural lands the Company will either sell outright in small parcels, or lease on shares to farmers as may hereafter be determined.

The grazing lands are capable of sustaining 20,000 head of cattle, and the Company will soon make arrangements to purchase cattle to stock the lands.

The mines of the Company, eleven in number, comprising over 200 acres in extent, are now sufficiently developed to prove the existence of large bodies of gold, silver, copper and lead ore of paying quantity and quality.

Further developments will be pushed with all possible vigor, and the products will add largely to the revenues of the Company.

It is proposed to increase the furnace plant on the Santa Cruz River by the addition of a reverberatory furnace, jacket and blower, making the capacity equal to 50 tons of ore per day.

It is intended to establish at Calabasas, as early as practicable, thoroughly equipped reduction works and furnaces to meet the growing demands of the mining developments of that country.

PRODUCTIONS.

The 10,000 acres of agricultural land are capable of producing 200,000 bushels of wheat, and 400,000 bushels of corn each year, which will yield an annual net income of nearly $200,000, if worked on leases or shares.

It is estimated that the annual income from stock raising will alone amount to over $100,000.

The income from the mines is of course less certain, but with proper management can be made very large, as the mines all promise as well as any that are not fully developed.

CAPITAL STOCK.

The capital stock of this Company is $5,000,000, divided into 200,000 shares of the par value of $25 each, and is non-assessable.

The Company will be under the management of the following named gentlemen as directors:

PLINY NICKERSON, of Nickerson & Co., Boston.

GEO. B. WILBUR, Director New Mexico and Southern Pacific, Mexican Central and Atlantic and Pacific R. R. Co.'s.

A. B. LAWRIE, of Mackintire, Lawrie & Co., Boston, Director Sonora R. R. Co.

ARTHUR SEWALL, President Bath (Me) National Bank, Director Sonora R. R. Co.

S. S. SLEEPER, of Solomon S. Sleeper & Co., Boston.

GEO. H. QUINCY, of Harwood & Quincy, Boston.

C. P. SYKES, of Calabasas, Arizona, Director Arizona Southern R. R.

The proceeds of 60,000 shares of the capital stock will be paid into the treasury to be used as working capital, and for such improvements as may hereafter be deemed necessary.

PROPOSAL.

The Company, through its Financial Agents, offers to subscribers the entire capital stock of 200,000 shares, at $6 per share, payable 25 per cent. upon allotment, and in instalments of not more than 25 per cent. each month thereafter.

Books of subscription will be opened Monday, June 6, 1881.

The right is reserved to pro-rate subscriptions in case they exceed the amount offered.

All subscriptions should be sent to the Company's Financial Agents, Messrs. C. H. VENNER & COMP'Y, 52 Devonshire Street, Boston, from whom all further information can be obtained.

Subscription under Circular No. 1,

TO THE STOCK OF THE

SANTA RITA LAND AND MINING CO.

BOSTON, ... 188

In consideration of one dollar paid by C. H. VENNER & COMP'Y, Financial Agents, the receipt of which is hereby acknowledged ..... hereby subscribe for ..... shares of stock of the SANTA RITA LAND AND MINING COMPANY, and agree to pay for the same the sum of ..... dollars, upon the terms and conditions specified in Circular No. 1.

PRESENTED BY
THOMAS MINNS.
BOSTON.

PROSPECTUS

OF THE

Santa Rita Land and Mining Company.

CAPITAL STOCK, 200,000 SHARES OF $25 EACH.

The property of the

SANTA RITA LAND AND MINING COMPANY

Consists of the valuable land grants of Calabasas and Tumacacori,—51,000 acres,—and the mines of Gold Mountain Tunnel, Buena Vista, San Xavier, Patterson, Arizona King, Arizona Queen, Democrat, Veta, Banner, Warsaw, and the Spondulix, with one thousand lots in the important town site of Calabasas. These are all situated in the county of Pima, Arizona Territory, and are admirably located as to accessibility and convenience of transportation to and from the mines, while the site of Calabasas has an historic record as an old trading rancho, and for its commercial significance and possibilities. It is situated in the valley of the Upper Santa Cruz River, within ten miles of the Mexican frontier, and on the direct line of travel between Tucson and Sonora. The mining works are at the San Xavier lode, eighteen miles south of Tucson, and in the town of Calabasas, at the junction of the

SANTA CRUZ AND SONOITA RIVERS.

The town site is situated upon the Calabasas Rancho. The title to this grant was first made under a royal ordinance of the King of Spain, issued at Madrid on the 4th day of December, 1786, and subsequently recognized by the Mexican Government, after her struggle and separation from the mother country, as shown by the records of Sonora; also by the treaty stipulation between the United States and Mexico, known

as the "Guadaloupe Hidalgo Treaty," ratified by the United States on the 16th day of March, 1848, and re-affirmed by both governments on the 29th day of June, 1854, by a subsequent stipulation, known as the "Gadsden Treaty." This tract was purchased of the Mexican Government in 1842, by Don Francisco Aguilar, and afterwards by him sold to Gov. Manuel M. Gandara. The title is indisputable, and as good as any ever issued by the Mexican Government.

The title to these important properties rests under the mining laws of the United States, as well as, in the case of the Calabasas and Tumacacori land grants and town site, under Spanish grants confirmed by Mexican laws, the validity of which is approved after full investigation by able lawyers accustomed to the examination and prosecution of Mexican land grant claims and mining titles. The region in which these properties are located is now justly attracting great attention, not in California alone, but throughout the United States. Arizona is without question, as to mining possibilities,

THE COMING COUNTRY.

Within the past twelve months a widespread and growing interest has been aroused. This is especially true of the southern portion of the Territory, lying between the Gila River and the Mexican frontier, from north to south, and the 110° and 112° of longitude, east and west. The area thus defined, and which is in large part embraced by the map attached hereto, contains the most important town in Arizona, TUCSON; and, also, valleys of the Santa Cruz, Sonoita, Arivaca, San Pedro, and Babacomra; streams which in an Eastern State would perhaps be regarded as insignificant, but which in their value as sources of irrigation and consequent fertility, are in Arizona of the utmost importance. The section embraced by our map lies within a remarkable rain belt, which covers an area of about forty miles in width, and takes in the whole of the Santa Cruz valley, the Sierras, Atascosa and Santa Rita, to the east and west of the stream, as well as the region for some distance to the east of the valley named. The *Hand Book to Arizona* thus describes the country and the extent and effect of this rain belt:

"The valley of the Santa Cruz is formed by an extensive marine deposit of the quarternary age. The archæan sea which once covered it has vanished, and the valley now receives only the drainage of Central Southern Arizona. Owing to the loose character of the soil, the water

soon disappears from the surface. The Santa Cruz, up to Tubac, marks the western limit of a rain belt, which extends eastwardly from that point about one and a half degrees, and to the south about sixty miles. North of Tubac, striking as it does the western spur of the Sierra Santa Rita, its breadth sensibly lessens, and it runs northwesterly, narrowing as it bends, until it fades out at Prescott. This rain belt, or current, evidently comes up from the Pacific through the Gulf of California, pushing inland until it strikes the outlying spurs of the Sierra Madre, by which it is conducted, and falls as rain at the southern extremity of the belt. It again diverges, and moves northward, until it finally disappears at the point already mentioned. The rains are semi-annual, summer and winter, and the chart indicates the total annual fall to be from twenty to twenty-four inches across the entire belt."

The town of Calabasas, as well as the mines in the San Xavier group, are both located on the western line of this important rainfall.

The valley of the Santa Cruz River, in which Calabasas and the San Xavier mines are located, is the natural pathway to and from

ARIZONA TO NORTHERN MEXICO.

It offers the only open valley road to be found on the southern frontier of Arizona, from its termini on the Colorado River below Yuma, eastward to the western slopes of the Chiricahua Mountains. Along it travelled the ancient Toltecs and Aztecs, for it is evident that there must have been for centuries before the Spanish occupation of Mexico a considerable traffic and intercourse between the communities who built and inhabited the great towns and settlements on the Gila, Salt, Little Colorado, Verde, White, and other valleys in Central Arizona, as well as the Moqui towns on the great Colorado Plateau, the Zuni and other Pueblos on the Rio Grande, and elsewhere in New Mexico and Southern Colorado with the races who created empires and built great cities in Southern Mexico and Central America.

The crumbling ruins of the

CASA GRANDE,

on the Gila River near Florence, and of the mounds at La Tempe and elsewhere on the Salt River, as well as the many other evidences of an extensive town building and agricultural life which are found in Arizona, prove the correctness of this supposition. We know beyond question

that the first Spanish invader of Arizona and New Mexico marched from Central Mexico with his forces, through the Valley of the Santa Cruz, camping doubtless on the present site of the town of Calabasas. That expedition, under the command of Vasquez de Coronado, passed down the Valley of the Santa Cruz in the early spring of 1540, on the search for the "Seven Cities of Cibola." Father Marco de Niza had entered Arizona by the same route the year previous. This expedition settled the fate of the valley for the next two centuries. Its beauty and fertility attracted the attention of the Spaniards. It became a favorite field for missionary endeavor, and was early occupied and retained by the Jesuit Fathers, who held possession, not undisturbed, however, until the early part of the present century. The missions of

CALABASAS, HUABABI, TUMACACORI AND SAN XAVIER,

With those at Tubac and Tucson, mark the northern limit of Catholic endeavor and Spanish enterprise in this direction. The Colonial authorities established military posts at Calabasas, Tubac, and Tuqulson (Tucson), and the latter town still exists, a flourishing frontier city of at least 7000 inhabitants. Under the direction of the good Jesuit Padres, the upper Santa Cruz Valley was extensively cultivated, for at least two-thirds of a century, and many rich mines were opened and worked in the Santa Rita, Atascosa, Patagonia, and other neighboring mountain ranges. Early in the present century, the Apaches destroyed the missions and devastated the lands, closing the mines to labor and enterprise; and have, for nearly half a century, until within two years past, made all habitation and exertion in this region—so wondrously fertile, so attractive in scenery, and so

MARVELLOUSLY RICH IN THE PRECIOUS MINERALS

—extremely dangerous and more than hazardous.

Old Spanish writers and missionary records are full of references to this region.

HUBERT H. BANCROFT,

The well-known historian of the *Native Races of the Pacific Coast*, discusses the discovery of Southern Arizona by the Spaniards, in the fourth volume of that work. The first reports reached them in Mexico through natives, in 1530. Cabaza de Vaca, shipwrecked in the Gulf of California, wandered into the central regions, and, returning in 1535, fired the

missionary zeal of Padre Marco de Niza, who, with the negro Estevan, as a companion, started to find the mythical "Seven Cities." It was his report of (in all probability) the Zuni towns, and those of the Rios de Chelly and Chamas, in New Mexico, which started the expedition of Coronado. For two or three generations, at infrequent intervals, Spanish expeditions, both of war and religion, passed into the wilderness. Missionary settlement begun about the last quarter of the seventeenth century, so far as can be ascertained. There were at one time at least a dozen important missions in the section embraced by the map. Those of St. Gertrude, at Tubac; of St. Joseph, Tumacacori (both in ruins); of St. Xavier del Bac, still in use on the Papago Reservation, and that of

HUABABI MISSION CHURCH,

Founded by Padre Emilia, in December 1690, are located (with the exception of San Xavier Church) within the limits of the grants named in these pages. The Huababi Mission was among the earliest established within what is now the Territory of Arizona. It continued in existence until the first expulsion of the Jesuits, in 1767, and was not re-occupied by them when those at Tubac and Tumacacori were again opened. The history of this mission is recorded in Padre Pfefferhorn's book on Sonora, which states that the missionaries worked

A NUMBER OF MINES

In the neighborhood. There were no less than twelve shafts open, and twenty-two arrastas kept employed. This work was done on the mountain over the line of GOLD MOUNTAIN TUNNEL. The quartz is spoken of as soft and gold-bearing. The ruins of old walls, crumbling almost to the ground, plainly showing the form of a small church, built of adobe and soft brick, are still to be seen. About two hundred yards from the Santa Cruz, and not over two and a half miles from the town site of Calabasas, there are still to be traced ruins of acequias, arrastas and other rude works, which, with the church, were constructed by Indian labor, under Jesuit direction. The old author named speaks of the ore taken from the mines worked under the mission, as yielding from $50 to $210 per ton of 2,000 pounds.

The importance of the Calabasas Rancho is made apparent even by a cursory examination of Spanish records and Mexican history. In an old map, prepared, as appears on the original, by P. F. Petus, Font Tubatano

(Tubac), 1770, and first published in Hinton's *Hand-Book to Arizona*, Calabasas is marked as "*Pueblo y Real de Uinas y demas poblaciones.*" At the date of this map, the Hand-Book says: "Calabasas was a ranch and mining camp of importance." Spanish records show two hundred silver mines as being worked in that section. Professor Thomas Davis, a well-known mining expert employed in developing the Santa Rita interests, passed up this valley to Mexico in 1830. The San Xavier Church was at the time occupied by a Mexican, and the ranches at Calabasas, Cañon Reventon, Sopori and Arivaca were under cultivation to a limited extent. Mr. Bartlett, of the U. S. Boundary Commission, who passed through the Santa Cruz Valley and encamped at Calabasas in 1851, wrote as follows:

"This Calabasas, I was told by Leroux, was a thriving establishment when he visited it twenty years ago. A large tract of land was then under cultivation, and herds of cattle were reared on the adjacent hills."

Leroux was a famous New Mexican guide of that day. Ross Browne adds his testimony to the value of this region, and especially of Calabasas, in the following: "Proceeding on our journey, we reached the fine old ranch of Calabasas.

THIS SPLENDID TRACT OF COUNTRY

Belongs, I believe, to Señor Gandara (whose titles are now the property of the Santa Rita Land and Mining Company), formerly Governor of Sonora. * * This ranch is one of the finest in the country. It consists of rich bottom lands and rolling hills * * embracing excellent pasturage and rich arable lands. Situated as it is at the junction of the

TWO MAIN ROADS FROM SONORA,

The Santa Cruz and Magdalena, it might be made a very valuable piece of property in the hands of some enterprising American. * * Calabasas (old buildings) presents something of a Mexican military post, which I believe it was in former years. * * Major Stein had his head-quarters here in 1856-57. It was occupied for nearly a year by the First Regiment of Dragoons under his command. It was also temporarily occupied by Col. Ewell—later a General of the Confederate army."

Ross Browne, the well-known author and artist, thus describes in his interesting *Apache Country*, his entry into this region:

"I had supposed previous to our entrance into this region, that Arizona was nearly a continuous desert, as indeed it is from Fort Yuma to Tucson; but nothing can be a greater mistake than to form a general opinion of the country from a journey up the Gila. The valley of the Santa Cruz is one of the richest and most beautiful grazing and agricultural regions I have ever seen. Occasionally the river sinks, but even at these points the grass is abundant and luxuriant. We travelled league after league through waving fields of grass from two to four feet high, and this at a season when cattle were dying of starvation all over the middle and southern part of California. All along we passed through the richest ranges of pasture and farming lands we had yet seen. Abundance of mesquit, cottonwood, willow, and walnut are found in the river bottom, and the grass is so luxuriant that in many places it is difficult to travel out of the beaten track."

Describing a journey into the Santa Rita, the same writer says:

"It was a matter of surprise to most of us how luxuriant the grass was on the mesa, and what an inexhaustible support it affords for innumerable herds of cattle."

Again he writes: "As a grazing country for cattle and sheep, the valleys and foothills of the Santa Rita cannot be surpassed. Grass of every variety known in Arizona covers the ground all the year, and there is practically no winter for live stock."

THE CLIMATE IS SO MILD,

even in the months of January and February, it is a positive luxury to sleep in the open air. Of wood "the valley of the Santa Cruz furnishes an inexhaustible supply."

Col. C. D. Poston, formerly U. S. Register at Florence Land Office, wrote of this region from 1856 to 1860, that it "is a very rich body of land, and with irrigation produces two crops annually—corn in the spring and wheat in the autumn. Wild game in abundance could be procured in the immediate vicinity."

Of the valley of Sonoita, also, Mr. Browne wrote that it "abounds in very promising gold and silver ledges. Some of the finest farming land in the territory lies along the borders of this stream. * * I have been told that the wheat and corn crops were absolutely wonderful."

Evidence can be added almost to surfeit of the fertility of these valleys, and of the beauty of the landscape, with all its bold and striking

adjuncts. Mr. Bartlett's "Personal Narrative" gives the following description of the Valley of the Santa Cruz, as seen from the Santa Rita, when crossing them from the east:

"A few miles brought us to a *puerta*, or gate, in the mountains; passing which, we emerged to a very broad and open plain of remarkable beauty. From the elevation where we first saw this valley, the prospect was exceedingly picturesque. Around us grew the maguey, the yucca, and various kinds of *cacti*, together with small oaks; while beneath us, the valley spread out from six to eight miles in width and some twelve or fifteen in length. Unlike the desolate and barren plains between the mountain ridges, which we had crossed between the Rio Grande and the San Pedro, this valley was covered with the most luxuriant herbage, and thickly studded with live oaks; not like a forest, but rather like a cultivated park."

The author of the *Hand Book of Arizona* has devoted one of his most attractive chapters to the Santa Cruz Valley, the Sonoita, and the Sierra Santa Rita, which form the principal topographical and striking features in the landscape. He says of the superb landscape on which a traveller gazes as he looks up the Santa Cruz, that:—

"From Tubac, the view is a striking one; grandly picturesque, and though rugged yet bold; and having, from the abundance of trees, and the regular outlines presented, elements of exquisite beauty to gratify the eye and appeal to the imagination. From the outpost mount the jutting spur trends easterly, rising boldly into the three great peaks, which mark their range with a more striking grandeur than any other south of the San Francisco Mountain.

"The Valley of the Santa Cruz at Tubac is at least 3,000 feet above sea level, while

THE ATASCOSA RANGE,

To the west, that—brown, bald and bare—looks down upon the old and dilapidated town, and the lovely valley in which, like some huge daub on a fair picture, it sets—a very rugged specimen of an Arizona range—has an altitude of about 6,000 feet. The Santa Rita rises, not precipitously, like the western wall of the valley, but with a bold, grand, regular swell, until the serrated ridge attains an altitude of 8,000 feet. The elevations are only approximate, never having been accurately ascertained. Tubac sets at one end of what may be termed a semi-

amphitheatre of valley and mountain—the Sierra Atascosa ranging for some twenty miles almost due north and south, until near Calabasas it trends slightly to the east,while the Santa Rita sweeps boldly back in a south-easterly line, from the point where the jutting spur, with its conspicuous advanced peak, impinges just above Tubac, on the Santa Cruz Valley. Near the Sonoita is a small range, the San Cayetanos, which flanks the Santa Rita's southern wing, and somewhat narrows the valley. Beyond is the Potrero, through which the Santa Cruz flows northward. Back from Tubac, direct as an eagle flies, the eye of the observant traveller will rest upon Mount Wrightson, or 'Old Baldy,' as it has been called by the Arizonian. This distinct and strongly defined peak, covered with the brown grasses of the region almost to its bold summit, towers over the valley at an altitude of 10,500 feet above sea level. Its general direction is north-west and south-east. To the north and west is a bold but lesser cone, which it is proposed to call Hopkins' Peak, in honor of Gilbert Hopkins, a mining engineer, slain within the shadows of these mountains by the murderous Apaches. To the east and south of Mount Wrightson, rises another and smaller peak, which has been called Grosvenor, in honor of another bold pioneer, who, in 1861, was slain near the old Hacienda del Santa Rita. * * * Professor Raphael Pumpelly (of Harvard College), who was then engineer of the works and mines, gives a spirited account of what life in Southern Arizona, and with the Apaches on the war-path, was at the time, in his valuable work, *Across America and Asia*, which should be read by all who desire the testimony of an accomplished *savant* and mineralogist as to the vast mineral wealth embedded in this range. Bold as are the sides and summits of this range, cut as it is by deep gorges and canons, whose depths make sombre shadows in massively marked purple hues as the sunset falls, there is nothing gloomy or even wild in

THE GREAT FREE SWEEP OF LANDSCAPE

Unrolled before one at Tubac, or, better still, at the ruins of the Tumacacori Mission, three miles above. The Santa Cruz flows very near the Sierra Atascosa, at whose base this evidence of Jesuit endeavor and sacrifice is seen — a strange spectacle, indeed, in so wild a land. Looking eastwardly, the eye takes in, for some miles, a bold reach of rising mesa, whose rugged lines are made picturesque by the abundant oaks and mesquites, and are softened by the greyish-brown gramma

grass, which is here so abundant. During the rainy season, the Santa Rita is verdant to the summit of the ridge, and the scenery is altogether striking and beautiful. The narrow valley, at this point about two miles wide, has an abundant fringe of ash, mesquite and cottonwood trees, the latter being of the largest size. There is a sufficiency of water for all purposes, and with careful engineering, irrigation will always find an ample supply."

"The general appearance of the mountains that border the Santa Cruz is not," says Col. Hinton, "unlike the Colorado Park system, except that one misses the towering snowy ranges. Nature has nowhere in the North American Cordilleras brought together as many attractions for the hardy pioneer, explorer, miner and *savant*. Looking east at the range from Calabasas, the observer would take in the gorge in which the Salesi camp is enclosed. Mount Wrightson is here, as elsewhere, the great feature of the superb landscape.

"Coming from the direction of

THE SAN PEDRO

To the east and south, through the cienaga, a wide, beautiful view opens before the traveller. For miles, south, east and west, the magnificent rolling plain is outspread. Every foot of the surface is covered with grass. Clumps of Emory's oak are found growing among the foot-hills. They are just dense enough to afford a shade, and yet do not interfere with the growth of the grass. There is no undergrowth of bushes, so that the scene fairly bears comparison with a park. Streams with water, warm but pure, from the mountain, flow down almost every ravine. Springs are abundant, and furnish a large volume of water. Higher up on the mountain side pines and scrub-oaks grow abundantly. Tuscon and the country about is supplied with lumber from this region. This is the character of the country from the cienaga south to the Santa Rita, past Camp Crittenden, which is now abandoned. The valley of the Sonoita proper begins at this old post, and extends therefrom south and west. In fertility of soil it is unsurpassed. The corn grown there would be unequalled on the Missouri bottom lands, and will average ten feet in height, being well eared also. The sunflower (indicator of fertility) grows to an enormous size. All the vegetables are produced in abundance. The river rises and sinks several times within twelve miles south of Camp Crittenden, but there would

be no engineering difficulty in preventing this by the construction of a new channel. The cost would not be large. There is a good supply of timber also—ash, walnut and other hard woods being available. The hills are covered by a growth of dwarf oaks, enough for years to come. It is worthy of note at this point that

THE VALLEYS OF THE SONOITA

and of the Santa Cruz give two luxuriant crops annually. Barley and wheat are sown in November, and harvested in May, and corn may be planted in June and gathered in October. This sort of cultivation has been done for generations past on the same land, and without returning aught to the soil by the Mexican and Indian rancheros. The portulacca and chenopodium, which grow on the lower grounds, have been resorted to as anti-scorbutics when other food of proper character could not be obtained. The giant cacti almost disappear on the grassy plains and in the valleys east of the Santa Rita, but grow more abundantly on the southern slopes of the Santa Catalinas, to the north, than in any other portion of the region.

"The vicinity of the Santa Rita is also full of interest to the naturalist. Valuable additions to science have been made there by members of different U. S. exploring expeditions. Among the rare animals is the dwarf deer, no specimens of which have been found in the United States, except in this vicinity and that of the region south of Mount Graham. They are very handsome and attractive, and not especially shy. In the neighboring State of Sonora, also, they may be found, but except in some portions of Northern India, none are known to exist elsewhere. The variety of birds is quite large, some being peculiar to the region. The larger degree of moisture has its effect in the variety of coloring in both birds and plants. Among the feathered fauna are several varieties of humming-birds, and a number of finches. The ground squirrels are numerous. Black antelope are also seen. Wild horses are still not uncommon on the cienaga, and in the grassy intervales of the Babacomori. The long-eared owl is also peculiar to this section, and another member of this family has the curious habit of going abroad only in the early morning, and of associating in groups. Grouse of a dusky hue are found on the southern ridge of the mountain range. Eagles, 'soaring high on pinions wide,' are not uncommon.

A rare specimen of the falcon has been seen, and the American vulture is a denizen of these valleys.

DR. ROTHROCK,

of the Wheeler Exploring Expeditions, in the report for 1875, who traversed Eastern Arizona during that year, from Fort Wingate, New Mexico, to the Santa Rita mountains, speaking of the climatic conditions, writes: 'Sun-stroke is almost, if not entirely, unknown.' The excessive heat indisposes to active exertion, but, adds the doctor, 'this feeling is not akin to exhaustion, and it is common to all tropical and subtropical regions alike.'

"The immigrant must not anticipate seeing an immense stretch of country, everywhere alternating in beauty, between greenswards, heavy forests, and abundance of water, like the familiar spots of the east. He must expect at present to find sterility and aridity impressing their hard lines on every feature of the landscape; but he must also remember that Utah, so large a portion of which is now covered with fertile farms, with vineyards and orchards laden with fruit, was only a few years ago almost as most unpromising as Arizona now is; that it is still within the memory of man that prophets of ill-omen predicted that California, now one of the granaries of the Union, could never furnish flour enough for her own use. We may fairly expect, under the demands of our increasing population, that these waste places will be redeemed, and made tributary to our civilization. Labor, here as elsewhere, will bring its reward; but acres of waving, maturing crops will not come unearned."

A VIVID PICTURE OF AMERICA'S ITALY.

"Besides the material results, the strangeness of forms, and the marvellous atmospheric effects of the climate, hold the senses of all whose imagination is alive to natural beauty. Among the most attractive results of the rarefied atmosphere, the deep, clear sky and the rich, strange colors which are seen and felt on every hand, is that witnessed at midnight; it will not soon be forgotten, even by the most unimpressive and matter-of-fact of observers. The nights grow cool, no matter how heated the day has been: and, sleeping out-of-doors, the unaccustomed traveller will seek fresh covering in the high noon of night. He will indeed be very dull and very tired if he turns to sleep at once. Above

the deep arch glows, intensely blue and clear, as deep and azure-hued as the fairest Italian skies. The stars look marvellously large and bright, and present a far more countless host, it would seem, than is observed in other latitudes. Lying on the rude earth and looking up to the wild dome above, it appears as if the glittering planets were coming down to crush and destroy. The feeling evoked is one of awe, intense and hushed. The deep interstices grow deeper and grander as the eyes are strained in solemn wonder. There is above the horizon edge a warm, gray tint, plainly fretted where it fades out and is absorbed in the intense azure above. The whole horizon is aglow with a rich hue of faint rose, shooting up 'libidinous prongs' (as Walt. Whitman says), and fading and passing, as the early dawn comes apace, into a pale golden tinge. These skies are translucent in depth; wondrously varied in tone; a constant delight to the imagination, and continually playing fantastic tricks with the observer.

NO POET OR ARTIST

Need ask a finer inspiration than the marvellous glory of an early sunrise on the slopes of the Santa Rita, watching thebold brow of Mount Wrightson, as it is unveiled by the rising sun from the gray mists that have gathered around the peak during the night. The great bars of crimson, the brilliant masses of gold, the deep purple hues that rest on the ridges and wrap the abrupt gorges of the range in wondrous beauty, with the rich tints of pale amber and soft aqua-marine out in the dazzling blue of the fading atmosphere—these tend to make a picture that, once seen, will long be remembered, enhanced as it is by the striking features of the physical formation, and the strange aspects of the vegetation that rises all about one. Gray grass, weird-looking cacti, brown mountain sides, rocks painted in dazzling colors by the erosion of wind and rain; a broad stretch of landscape; strange-shaped peaks, all combine with the spur to adventure which follows the presence of unworked mineral wealth, to make this region one of the most attractive within the borders of the Union."

The coolness of the nights is due to the rapid radiation of solar heat absorbed by earth during day. It is always rapid when air and sky are clear, hence frost on starry nights, and none when cloudy.

THE PAPAGO INDIANS,

A branch of the Pima nation, whose principal home for centuries past

has been and still is on the Gila River, about 100 miles northwest of Tucson, and near the thriving town of Florence, have long lived about the famous structure known as the Mission Church of San Xavier del Bac.

SAN XAVIER CHURCH

is situated about eleven miles north-northeast of the San Xavier Mountains, in which are located all the mines of this company, but that known as the Buena Vista and Gold Mountain Tunnel, of which mention will be made hereafter.

A visit to the Mission Church would repay a long journey, for it possesses architectural merits, as well as a striking charm from its age and singular loneliness of situation, standing as it does a bold and solitary feature in a broad landscape of wild and almost weird beauty of clear sky, broad plain and sweeping mountain ranges. Sylvester Mowry wrote in his interesting pamphlet on Arizona that "incredible as it may seem, the Church of San Xavier, with its elaborate facade, its dome and towers, would to-day be an ornament to the architecture of New York." It occupies the site of a rude structure, erected in 1760. The present one remains unfinished to this day, though erected in 1768, and completed, as now seen, thirty years later. In all probability it was left so in order to avoid paying the impost or tax the Roman Church levies on all finished structures. It is still used for religious services, and its interior is lavishly decorated. The existence of this structure and the presence of the Papago Indians, for whom it was constructed and with whom it remains connected, is an element of great commercial value for all interests in the region, and to all who may become investors therein.

THE PAPAGO INDIANS

Afford an excellent class of labor, being noted as an industrious, chaste and temperate people. Their reservation embraces 70,400 acres; they number 5,800 souls, about one-half of whom are permanently settled. They raise considerable grain, have large herds of horses, mules and cattle, are always ready to labor, and are very friendly to American influences.

THE TOWN OF TUBAC

was once a Spanish Presidio and Mission of considerable importance. Its adobe buildings, nearly all in ruins, and containing but a few inhabitants, attached thereto by the increasing mining activity now seen in

the Santa Rita and neighboring sierras, form a picturesque adjunct to the striking landscape in which it is situated. The Mission of San Gertrude, the church walls of which may still be seen here, was located in 1751. The following most interesting narrative, found in the old archives of Tucson, about twenty-five years since, and here translated from the Spanish, is in proof of the trials to which, by the

MERCILESS INROADS OF THE APACHES.

the settlers of that remote period were subjected. It is strange to read this pitiful appeal, and then to carry the imagination across the wild wilderness to the eastern verge of a great continent, where a nascent nationality was engaged in the severest and harshest scenes of its earliest struggle. But to return to the Spanish petition:

SAN AUGUSTIN DE TUCSON, November 24, 1777.

SENOR CAPITAN DON PEDRO ALLANDEY SAVEDRA.—Respected Capitan:—In virtue of your order, dated the 20th of the current month, to the effect that I and two citizens of the most eminence, well known in the country and reliable, should appear in your presence to give you information concerning this locality as to watering-places, lands for cornfields, pastures for horses, and also as to points of ingress and egress of inimical Apaches, and where they make their abodes, I, Don Manuel Barrague and Antonio Romero and Francisco Castro (who are the two individuals who possess the requisites which you demanded), most respectfully obey, and affirm that the town of Tubac is situated between two mountains, which are distant from each other six leagues. In the valley there is much land, fertile and suitable for corn-fields. There is sufficient water for wheat growing, but scarcely enough each year for corn; but if that which is at Tumacacori be distributed one week to the Indian laborers and another for Tubac, it will sufficiently benefit the said laborers, and there will be an abundance of water; in this manner was it disposed of by our former Capitan, Don Juan Bapt. Angua, and recently this same disposition has been sanctioned by your honor. There is much pasture, with an abundance of sustenance for horses and cattle as well on the hills and dales as on the mountainless plains. In the same valley there is a great deal of cotton-wood and willow, and in the Santa Rita mountain there is an abundance of

EXCELLENT PINE OF EASY ACCESS,

six leagues distant. Of provisions alone there is raised every year by the inhabitants six hundred or more fanegas of wheat and corn, not one-third part of the land being occupied. There are many mines of very rich metals to the west, in the vicinity of Aribac, at a distance of seven leagues; there are three, particularly, in the aforesaid vicinity, one of which yields, according to rule (de sopotable ley), a silver mark for one arroba (twenty-five pounds) of ore, the other yields six marks from a load (100 pounds) of ore and the third yields a little less. Three leagues beyond this vicinity, in the valley of Babacomori, there are fine gold placers, examined by Don Jose de Toro and this whole population. After three visits which these people made with Don Jose at great risks, and by remaining there over three days each trip, it was verified, and by their having brought away and spent with two traders, who at this time have it, as much as $200 in gold. In Santa Rita Mountain and its environs, which is distant from Tubac four leagues, there have been examined five silver mines; two have been tried with fire and three with quicksilver, with tolerable yield. All of this is notorious among this entire population, and they do not work them because there are Apaches in all these places; they live and have their pastures there, and pass continually by this mountain to a place a little more than four leagues off, called Hot Springs (Aqua Caliente). Daily experiencing more violence from the enemy, because he is aware of the few troops that we possess, we have desired

TO BREAK UP OUR HOMES

and sell our effects; and you being aware of it, we received the order which you were pleased to send us, imposing heavy penalties upon us if we should remove or sell our goods, and we have punctually obeyed it, and now finally, the last month, the Apaches finished with the entire herd of horses and cattle which we had guarded; and at the same time with boldness destroyed the fields and carried away as much corn as they were able. Since the fort was removed to Tucson these towns and missions have experienced some casualties, so much so that they have been obliged

TO BURN THE TOWN OF CALABASAS,

a calamity it never before experienced. Also, but a few days ago, the cavalcade which the Apaches brought from the west was grazing for

three days in the vicinity, falling every day upon the fields to load with corn and to run away with those whom they found there, and lastly, their not leaving the neighborhood, we momentarily expect that they may serve us and our families as they served our property, there being nothing else left for them to do. We trust in God that by the numerous petitions of the poor people this fort may be restored to its ancient site, and if necessity requires it, there shall be more troops to protect the herds, by remaining at the several points of ingess and egress which the enemy have established throughout this entire region, and that they may be continually watching from the hills and adjacent mountains. We humbly beseech you, in the name of the whole community, that you will pity our misfortunes and listen to our petitions, that you repair the continual misfortunes that we have suffered, being in continual expectation of our total destruction.

We live in great confidence, from the knowledge that some of us have of you, that by your exertions and by your conduct, and by that of the military commandant, we shall receive the benefit to which we are entitled, since no one is better known than Senor Savedra, and he knows that we exaggerate nothing, considering the many years we have been under his orders. Your humble and obedient servant,

MANUEL BARAGUE.

In the name of the entire community of Tubac,

FRANCISCO CASTRO,

ANTONIO ROMERO.

The following proof of the importance and character of the region under consideration is translated from a work by Jose Velasquez, published in Mexico in 1850, and will be read with interest:

PRESIDIO OF TUBAC.

"This Presidio is eighteen miles distant from Santa Cruz. The company is denominated 'Pimas de Tubac,' and numbers about thirty men. The Pueblo San Jose de Tumacacori and the mission of the same name belonging to it was very rich in cattle during the reign of the Spanish Government over it, and is one league distant from the Presidio. The topographical position is a low hill of small dimensions, with a very spacious valley of excellent lands, susceptible of producing all kinds of fruit, etc. It possesses fine pasture and water for the raising of cattle.

"The temperature is superior at all seasons of the year, and the water is of the most excellent quality. The number of inhabitants in 1850 was about 400. In this district there is a rancho called 'La Calabasas,' in which there are very rich gold mines, which are abandoned, also the rancho, for fear of the Apaches.

"The river running through it is the Santa Cruz, and the land produces all kinds of grain, etc."

The first Mission Church of San Xavier was erected in 1690; that now seen nearly a century later: the Mission of San Dominick, at or near Tucson, in 1650. The first Mission Church of St. Joseph Tumacacori was built in 1752, and one whose ruins now exist in 1802. It was destroyed by the Apaches in 1820. Tubac is located on the high road to Sonora, where, diverging west and south, roads to such points as Sopori, the Baboquivari, Fresnal in the old Papago country, the Arivaca Valley and the Cerro Colorado mines, necessarily enter the main line of travel. Mr. Bartlett found it occupied by Mexican troops when, in 1850—51, he was engaged in fixing the new boundary line between Mexico and the United States. At that time it was the principal place in the

PIMERIA ALTA,

as the territory south of the Gila River, below the 33d parallel from the line of New Mexico to the Colorada River was termed. In 1853, Col. Charles D. Poston and Herman Ehrenberg arrived there coming from San Francisco *via* the Gulf of California and Guaymas, across the northwest portion of Sonora, and through the Papago country. These gentlemen were the first Americans of any position to penetrate this region, except those who were with Bartlett and his expedition. Col. Poston, in a narrative, embodied by Ross Browne in his attractive book, "The Apache Country," says of this town and locality, under date of 1853:

"Arriving in the valley of the Santa Cruz, we found the old town of Tubac, abandoned by its Mexican garrison, and the population, which had been dependent upon them for protection against the Apache Indians, the most fierce and barbarous tribe of which we have any account. As the houses in Tubac were in a good state of preservation, we occupied them for headquarters during the ensuing winter,

and passed the time in exploring the surrounding country for silver mines. The winter season here proved very mild, and our animals were subsisted upon the nutritious grasses which abounded upon the hillsides. * * The Valley of the Santa Cruz is a very rich body of land, and with irrigation produces two crops annually—corn in the Spring and wheat in the Autumn. Wild game could be procured in abundance in the immediate vicinity, and by Christmas we had such a store of bear meat, deer, antelope, and fat wild turkeys, that no apprehensions of short rations disturbed our enjoyment. * * In the course of a few months several hundred people had gathered around Tubac, and engaged in planting; the mines developed a wonderful richness, and traders from Sonora, New Mexico and California came to supply all our wants with the productions of foreign lands, in exchange for the silver bars which we made 'current with the merchant.'" The same gentleman, in a report made to the Sonora Exploring and Mining Company, published in 1856, says: "The old town of Tubac was formerly occupied by a numerous and thrifty population, engaged in agriculture and mining. It is the very centre of the mining region in our territory, and has probably 150 silver mines within sixteen miles. Many of them were worked by the Spaniards and Mexicans in a primitive manner, but not opened to any extent, because they had not sufficient machinery or mining tools. * * Under the Mexican rule a garrison was kept at Tubac for the protection of the inhabitants, but only of sufficient force to enable them to work their fields; the mines had not been worked for (1855) fifty years."

In the same volume, Mr. Browne thus describes Tubac: "The old Plaza was knee-deep with weeds and grasses. All around were adobe houses, with roofs fallen in and the walls crumbling to ruins. Doors and windows were all gone, having been carried away by the Mexicans three years ago. In 1858—59 and '60, during which the mines were in progress of development, Tubac might well be regarded as the headquarters of civilization in the Territory. The gardens afforded a pleasant place of retreat in summer, with their shady groves of acacias and peach trees; and deep pools in the river, overhung by willows, were cleared out and made into bathing places." Mr. Browne added: "The mines are proverbially rich; and rich mines will sooner or later secure the

necessary protection for working them." He gives some interesting facts relating to its history. In 1840, according to Velasquez,

THE MEXICANS

had a garrison here of thirty men, the town containing a population of four hundred. In 1853, after it was transferred to the United States, the whole Mexican population retired to Sonora. When the Federal troops abandoned it in 1861, only twenty-five or thirty persons remained. These soon left, after considerable fighting with Apaches and Mexican robbers. In 1875, fresh impetus was given to prospecting by the Howard treaty with Cochise, and by the fact that under an Act of Congress, the mining claims that had been protected during the Indian and Southern troubles for their original holders, were liable to lapse if not then re-occupied. The town of Tubac and the Mission of

ST. JOSEPH TUMACACORI

are both embraced by the Spanish grants, known as the Tumacacori and Calabasas.

THE RUINS OF ST. JOSEPH MISSION

Tumacacori, are located on the west side of the Santa Cruz, about half a mile from the main road on the right. There is abundant evidence of long-continued cultivation in the vicinity. The first church building was constructed in 1752; and the present mission building, which is now in ruins, was built in 1802. It was destroyed by the Apaches in 1820. The mission buildings were of large extent, and their ruins cover a considerable area. The church itself is almost unroofed, the chancel with its dome still remaining in fair preservation, while the nave is open to the sky and the weather. The main structure is about one hundred feet long by forty-five or fifty wide. Its form is that of a plain Greek cross with a basilica. Two towers remain in fair preservation. On the west side an unroofed chapel stands, while on the other the sacristy is quite dilapidated. Prof. Thomas Davis states, that when he passed up the Santa Cruz Valley in 1840, the church roof was nearly intact, and much of the interior was in good preservation. There were then many fruit trees, pomegranates, peaches, etc., bearing profusely; and the walls that enclosed the home, orchard and garden were still to be traced; they are now almost obliterated. The church ruins set square

with the compass, the principal front facing the south. At the rear end there is a high wall in good preservation, enclosing a circular mortuary, still perfect. To the west of the church is a large enclosure, the walls of which are readily traced. It is evident that this was the work-yard of the mission, as there are the remains of arastras, rude smelting vases or furnaces, a few heaps of débris, etc., to show the once active working of ores. On the east ruins can be traced. Part of the front wall, with gateway, still remains. Beyond can be followed the lines of a small orchard and field, once enclosed; while in front of the church itself are the remains of another enclosure, in the southwest corner of which there are crumbling adobe walls that suggest out-offices, stables, etc. The church and mission buildings proper appear to have been enclosed and walled in the form of a cross, of which the east and west, especially the first, were the longest, while the north and south wings formed the transverse portion.

The general appearance of the ruins has not materially changed in the last twenty years. The former residences of the priests and the peons' houses are now almost destroyed, but the Campo Seante and the church remain very nearly the same.

No better region for colonizing can be found on our Southern Pacific frontier. Its fertility, salubrity, and charms of scenery and climate are amply proven. Anderson, in his "Silver Country," says of this whole region:

"Those who understand the agricultural capacity of other portions of the south-west, and who think that gold and silver comprise the sum total of its riches, have only to wait

THE ADVANCE OF RAILWAYS,

and a suitable development of Old and New Mexico and Arizona for further surprises, and statistical proofs of their delusion. * * Those keen observers of nature—the civilized native races—selected the table lands of Mexico as their favorite part of North America for founding an empire. They were entirely dependent upon the resources of their own land for the necessities of life, and could not have maintained a civilization celebrated for luxury unless the agricultural capacities were equal to their requirements, nor would the table lands of New Mexico and Arizona have supported the numerous cities and dense population of

their semi-civilized inhabitants, unless the products of the soil were great." The dry lands produced wheat, and as is well established, the Aztecs cultivated cotton, wool, coffee, sugar, silk, cochineal, all semi-tropical fruits; raised cattle and made wines. The grape of the Messila Valley, New Mexico, and of Taos, is well adapted to wine-making. The Santa Cruz is in the same latitude and a little south. A writer in *Lippincott's Magazine* has recently written that this is

"THE SANITARIO OF THE UNION,"

where the atmosphere is more dry than in Colorado, the sky brighter, the nights sufficiently cool for refreshing sleep, and free from damp night air; while the elevations "are such as to suit each case."

As practical evidence of the importance of this valley, letters from competent persons, long resident in the section, are here inserted. The first in order is from the

WELL-KNOWN ENGINEERS AND SURVEYORS, MESSRS. EDWARDS AND ROSKRUGE.

TUCSON, A. T., April 20, 1877.

COL. C. P. SYKES, Tucson, A. T. Sir:—Herewith we hand you a map compiled from the latest government surveys, showing the lands covered by the Spanish Land Grants of Tumacacori, Calabasas, and Huababi, situated in Pima County, Territory of Arizona.

These grants embrace about twelve thousand acres of the finest agricultural land in the territory; lying along the Santa Cruz River, the Potrero Creek, and covering the large valley at the mouth of the Sonoita.

We have examined this section (the large valley at the junction of the Sonoita and the Santa Cruz Valley is the valley of the latter, and the lands along the Potrero Creek), and its water supply, and believe that with proper care and management a sufficient quantity of water can be obtained to bring nearly the whole of this section under cultivation. The river bottom and adjoining foot-hills afford an abundant supply of good oak and mesquite timber, while the mountain ranges in the immediate vicinity contain extensive pineries. Some very rich mines of gold, silver and copper are now being worked, and others discovered, only waiting capital to develop them. The whole country is covered with

Plat of Preliminary Survey of the
Tumacacori and Calabazas
Private Land Claim.
Pima County, A. T.
Pueblo Legal containing 17,363.53 acres.
Estancia containing 34,644.40 "
Total — 52,007.93 "
Confirmation recommended in favor of
Charles P. Sykes and John Conroy Claimants
This plat of the preliminary survey of the
Tumacacori and Calabazas, Private Land Claim
situated on the Santa Cruz River, Pima County
Arizona, is strictly conformable to the field notes
of the survey thereof on file in this office, which
have been examined and approved.
Surveyor Generals Office,
Tucson A.T. 3d April 1880.
John Wasson
Surv. Genl.
Tp. 21 S. R. 14 E.
Tp. 22 S. R. 14 E.
Tp. 23 S. R. 14 E.
Tp. 22 S. R. 13 E.
Tp. 23 S. R. 13 E.
Santa Cruz River
Tumacacori Mission
Calabazas
Old Fortification
Bridge
Tumacacori
Bridge
Calabazas
Bridge
Mt. Cerro
Canoa Grande
Yerba Buena
Post S.E. cor.
Buena Vista Lands.
Original mound
Post S.W. cor.
Post N.W. cor.
Post N.E. cor.
N

nutritious grasses. Gold has been found in the foot-hills and gulches, but to what extent we cannot state.

This section has an elevation of 3,500 to 4,000 feet, thus escaping the heat of summer, so disagreeable at the mouth of the Colorado River, and at the same time not being subject to the severe snow storms common to a more northern climate.

There are several ranches in different parts of the valley, under a very high state of cultivation, producing two crops a year, among which may be mentioned, wheat, corn, barley, fruits and vegetables of all kinds, which find a ready sale and command high prices at the different towns, mining camps and military posts in the southern portions of the Territory. The Valley of the Santa Cruz above Tubac has one of the most delightful climates in the world, and is capable of sustaining a very large population. Yours, very respectfully,

WM. EDWARDS.
GEO. S. ROSKRUGE.

LETTER FROM EX-GOVERNOR SAFFORD,

Eight years Executive of the Territory, and now a resident of Tucson.

SAN FRANCISCO, August 10, 1878.

COL. C. P. SYKES.—Dear Sir;—In answer to your verbal request for my opinion of the San Xavier mines and the Upper Santa Cruz Valley, Pima County, Arizona, in connection with your contemplated enterprise, I will state that I have several times been at the San Xavier mines, at an early stage of their development, and consider that the immense outcrop for several thousand feet, together with all the indications, are of the most promising kind to warrant the belief in the existence of a very large and permanent body of ore, of an average grade in richness, and easy to work. The mines are admirably situated for cheap and profitable working.

The Santa Cruz Valley is one of the most beautiful and picturesque in the Territory of Arizona, and the valley proper from Tubac to Calabasas will average three-quarters of a mile in width, of very rich, arable land, and is watered by the Santa Cruz, a small stream running through it. A considerable portion of the valley is covered with mesquite timber, and the stream is lined on either side with large cottonwood trees. The land is covered with nutritious grasses, and there are several small

farms in the valley, some of which are under a high state of cultivation. Three miles above Tubac the Tumacacori Church is located, and was once the centre of an important mission.

On either side of the valley the lands rise from 50 to 75 feet, and are composed of rolling hills, covered with a variety of nutritious grasses, mesquite and oak trees, and from twelve to fifteen miles distant in the Santa Rita Mountains there are plenty of pines suitable for lumber, from which a steam saw-mill, now in operation, is supplied. I consider very few countries superior to this section for grazing, fruit-raising, mining and agricultural purposes.

The climate is excellent; for three months during the summer the warmth is about the same as at Sacramento, Cal.; the balance of the year is delightful; occasionally a little frost, but never snow.

The location you have selected for the town-site of Calabasas is central for all the mining and agricultural districts of the Upper Santa Cruz region, embracing the Santa Rita, Patagonia, Sierra Pajarite, and Atascosa Mountains, and is one of the most beautiful and picturesque locations of the valley, or of Southern Arizona, and situated as it is upon the great natural highway from Tucson to Sonora, and being sixty-five miles south of the former place, is admirably located as a business rival, seeking the trade of Sonora and the rich mining districts of which it is the centre.

You are justified in holding your property in high esteem for the legitimate investment of capital, and properly managed it cannot fail to prove a profitable investment.

Respectfully yours, A. P. K. Safford.

THE MOST PROMINENT MERCHANTS

and other citizens of Tucson unite in the following card:

To Col. C. P. Sykes, San Francisco, Cal.:—We, the undersigned citizens of Tucson, are well acquainted and familiar with the Valley of the Santa Cruz above Tubac, and consider that the lands of the valley are quite as good, if not more than equal in richness, with that of any other lands in this Territory, and that with a proper system of irrigation, there is plenty of water for the uses of all the arable lands of the valley.

The lands are susceptible of the highest state of cultivation, and will produce all kinds of grain, vegetables and fruit produced in any other

portion of the Territory, or in the State of California. There are now in the valley some of the best cultivated farms in the country. There is plenty of wood for practical purposes. The *mesa* is covered with nutritious grasses, and numerous veins of gold and silver have been discovered in the mountains and foot-hills bordering on the valley. We consider this section well adapted for a colony of people that wish to follow either, or combine the pursuits of agriculture, stock raising, or mining.

P. R. Tully,
S. R. Delong,
Estevan Ochoa,
J. Sam'l Hughes,
Jas. H. Toole,
F. H. Goodwin,
J. H. Archibald,
Lionel M. Jacobs,
B. M. Jacobs,
C. H. Meyer,
W. W. Williams,
John V. Allen,
C. H. Lord,
U. S. Depository.

Tucson, A. T., April 16, 1877.

To these statements of well-known residents, the following from Col. Hinton, of the San Francisco *Evening Post*, whose graphic pen has made Arizona widely known to the country, and from whose valuable work interesting extracts have already been made, will be of value, summing up as it does the practical observations of one trained to see, and thoroughly competent to note and state.

Col. R. J. Hinton

writes as follows:

San Francisco, Cal., August 1, 1878.

Col. C. P. Sykes, San Francisco.—My Dear Sir:—In accordance with your wish, I give you such fresh impressions as my knowledge of Southern Arizona enables me to offer. The Valley of the Santa Cruz south of Tucson, which I have thoroughly examined, is admirably adapted both to cultivation and grazing. It would sustain a considerable population, and that portion of it which lies from Tubac to Calabasas is especially well suited for the location of a large colony. Moderate use and good engineering would supply all the water, needed for purposes of irrigation. My impression is very decided, that under cultivation the whole valley would need but little from artificial sources. Water must of necessity be found very near the surface. Wells, comparatively shallow in depth, would not be costly. Windmills, as in California,

would come into use for raising and distributing it. With a liberal policy, a colony composed of persons of moderate means would find home-making a reasonable task. The climate is healthy and pleasant. The scenery is picturesque, and even grand. Cloudless skies lend a charm that is indescribable. All the cereals and roots of the temperate zone and those of the semi-tropics will grow abundantly. None of the fruits of either latitudes can fail to flourish. There are peculiar products, too, associated with the cacti, the mesquite and other plants and trees belonging to this region, which will ere long be recognized as valuable articles of commerce. Among other things, there is very little doubt but that the mesquite furnishes gum arabic equal to that of commerce. It has been used for many years by the Mexicans and Indians for all the uses to which the commercial drug is applied. Many valuable medicinal plants are also known to be found in this region. The *mesa* and even the mountain sides to their very summits are clothed at all seasons with nutritious grasses. Cattle can always feed and fatten here, and shelter would never be required. On the east side of the valley, the western slopes of the Sierras are well supplied with the low-branched emory oak. Beyond and on the eastern slopes up to the summit there is an abundance of yellow pine. I know of no portion of our frontier better adapted for homes and farms than the Upper Santa Cruz Valley.

Besides this, it is the natural highway to Mexico. There is a large traffic, and has been for two generations past, interrupted only by Apache warfare, now terminated, I believe, forever. Tucson has been in the main built upon the Sonora trade. When I was first there, some fifteen months since, I gathered statistics, showing an annual business of at least $5,000,000. Two-thirds of that was done with Sonora. Tucson cannot, in the nature of things, retain this Mexican trade, though it will, without doubt, more than replace it by the business which must come from mining, so long arrested and now rapidly developing, as well as by the speedy growth of a population sure to be largely dependent upon it as a railroad and commercial centre. The Sonora trade will, however, concentrate at some point in the Upper Santa Cruz. Tubac cannot, it seems to me, be resuscitated. Calabasas, the town site you have selected, is in every way suitable for an important local and commercial station. Admirably situated on a slightly elevated plateau or bench formed by

the junction of the Santa Cruz and Sonoita Rivers, it commands both valleys, and must obtain the trade of the region. Within a few miles of the Sonora line, the Mexican trade that now passes to Tucson must, it seems, if stores and warehouses are provided, halt and permanently remain at Calabasas.

There is another point of great importance for the future of such an enterprise as you project—Calabasas is the best point in the whole region for custom mills, furnaces and reduction works. It must draw a great business from the Atascosa, Arizona, Coyeante, Oro Blanco, Patagonia and Santa Rita Mountains. It is easy of access from all these ranges; wonderfully rich in metalliferous deposits. Besides Northern Sonora is unsupplied with aught but the rudest processes in the rudest of patio and arasta methods and constructions. The works, which it is more than probable will at an early day be constructed by the several syndicates who have control of large interests at the old Cerro Colorado mines, in the Arivac Valley and District, and in the Aztec, Tucson and Tyndall Districts of the Santa Rita and Coyeanto Sierras, are sure to be fully occupied with their own ores. Custom works can be sure to find all they can do. Calabasas is the most accessible source for their construction. There is no better place in this region for trade and milling. Another fact must be considered—the Santa Cruz Valley is sure to be traversed at no distant day by the Guaymas and Tucson Railroad. I am sure that energetically managed, and judiciously directed, your enterprise must prove a large success, and so wishing your anticipations may all be met favorably,

I remain yours truly, RICHARD J. HINTON,
Editor of Hand-Book to Arizona.

REDUCTION WORKS.

SAN FRANCISCO, Cal., July 31, 1878.

COL. C. P. SYKES, San Francisco, Cal.—Dear Sir:

Your favor of the 27th inst. received. In reply to your inquiry as to what my opinion is relative to the establishment of a complete system of reduction works in the Santa Cruz Valley, at a point near Calabasas, in South Arizona, for the manipulating the ores produced in the surrounding districts, I would state that the location is a very favorable one. The

erection of such works at Calabasas, with all its requirements, for the treatment of the different characters of ore produced, would be of invaluable benefit to those districts, and if properly managed ought to prove remunerative, much more so than if erected at Tucson, the former being more central and nearer the many districts, as a glance at the map will show you.

Yours respectfully,

LEWIS WILLIAMS.

Add to all these advantages

THE ENORMOUS MINERAL WEALTH

which awaits the brawny blow of labor, the skilled direction of fine nerved enterprise, and the sharp, keen brain of vigorous capital. The historical proofs of the mineralogical value of the region in which the property now being presented is located are beyond question. From old Jesuit records relating to the "Apostolic Labors" of their missionaries, and other Spanish works, from which, translated and quoted in the *Hand Book of Arizona*, the following extracts are given:

"In the year 1769 a region of virgin silver was discovered on the frontier of the Apaches, a tribe exceedingly valiant and warlike, at the place called Arizona, on the mountain ridge which hath been named by its discoverers Santa Rita. The discovery was unfolded by a Yaqui Indian, who revealed it to a trader of Durango, and the latter made it public; when news of such surprising wealth attracted a vast multitude to the spot. At a depth of a few varas masses of pure silver were found of a globular form, and of one or two arrobas in weight. Several pieces were taken out weighing upward of twenty arrobas; and one found by an inferior person attached to

THE GOVERNMENT OF GUADALAJARA

weighed 140 arrobas.* Many persons amassed large sums, whilst others, though diligent and persevering, found little or nothing. For the security of this mass of treasure the commander of the Presidio of Altar sent troops, who escorted the greater bulk of the silver to his headquarters, whereupon this officer seized the treasure as being the property of the Crown. In vain the finders protested against this treatment, and appealed to the audience chamber at Guadalajara; but for

*An arroba is a Spanish weight of 25 lbs of 16 ounces each.

answer the authorities referred the matter to the court at Madrid. At the end of seven years the king made the decision, which was that the silver pertained to his royal patrimony, and ordered that thenceforth the mines should be worked for his benefit. This decree, together with the incessant attacks of the hostile Indians, so discouraged the treasure-hunters that the mines were abandoned, as needs must be until these savages are exterminated."

Not all the priestly historians write so smoothly of this transaction, which, by the way, is commented on in every work upon Mexican mines since written and published. The reader who should desire to see how deep in gall a Castilian may dip his pen on the same subject should peruse a work entitled, "Los Ocios Españoles," or the documents yet existing in the archives of Pimeria Alta, written by Jesuit Fathers, who were despoiled by this act of the King.

"In 1817, Dionisio Robles, a courageous inhabitant of the town of Rayon, fitted up an expedition of over 200 men, and proceeded to the Santa Ritas to discover these rich spots. They fought their way for seventy leagues, found what they believed to be the old workings, but which were only the marks of the first prospectings; and as the quaint old chronicles say that 'although throughout all their seeking they did find virgin silver, more or less, yet were not these large masses of treasures so readily obtained during the eight days of their stay; so that finally, after much loss of life, being daily and nightly beset with the savages, they did turn their steps homeward, being exceedingly harassed all the way; bringing home, indeed, good store of treasure, but yet no single piece of pure silver weighing in excess of four arrobas. Yet,' remarks the chronicler, 'will it again and again be adventured until the savages become extinct, and

THE SUPERIOR RACE POSSESS

the untold wealth embedded in these mountains of Santa Rita.' These old gold hunters simply shared the fate allotted to all pioneers. But they have cleared the way for the coming man—for the race of to-day. The members of the Robles expedition unanimously agreed that the entire region was wonderously rich in minerals, and that to the east of the scene of their explorations 'the range was filled with veins of gold and silver crossing each other in all directions, and upon this portion of

the country did the savages most terribly assail our forces.' The Jesuit Fathers, who built the Mission of Tumacacori, found at last how little real power they had; for when most they believed in their security and strength, after they had amassed unbounded wealth, on one fine day the red man encircled them with fire and knife, and not one Padre escaped to tell the story. So ended the old Mission." There can be no question whatever as to the richness of the mineral deposits of this whole region. Gold has been found in vein and flood. There are extensive placers in the Finiajas and Santa Rita mountains. Within an area of forty miles north and south, and not over, as a rule, twelve miles east and west, may be found concentrated what has already proven to be one of, if not the richest mineral regions in North America. The major portion of this region can be made tributary to the proposed

CALABASAS REDUCTION WORKS.

A milling town is always a prosperous one, and the speedy erection of such works, which is now insured, will at once tend to make prosperous homes and settled life. Thousands of claims have been taken, and as many more, equally as valuable, remain to become the prizes of enterprise and industry. With the first steps to the erection of reduction works, a great impetus will be given to prospecting and working. The Santa Rita Land and Mining Company fully comprehend the importance of the enterprise. Every exertion is being and will continue to be made. The following description of the land belonging to the Calabasas town site, and the facilities for obtaining water, from the pen of the

COMPANY'S SURVEYOR,

Mr. Edwards, of Tucson, will prove its value:

TUCSON, A. T., May 22, 1878.

To COL. C. P. SYKES.—Dear Sir:—

In company with yourself I visited the Calabasas Land Grant, situated in the Santa Cruz Valley, about seventy miles southerly from Tucson, A. T.; gave the lands a very thorough examination, and afterwards made a topographical survey of that portion lying on the Sonoita Creek, where it joins the Santa Cruz River.

Accompanying this letter, I submit my map with the plan of the pro-

posed town of Calabasas and a system of farming lots adjoining the same, marked thereon.

This section of the grant is perfectly smooth—as indeed is the whole of the valley included in it—with a gentle fall or slope to the northwest, and is all susceptible of cultivation by a proper system of irrigation. Both streams sink in dry seasons above this point, and run for some distance underneath the surface. That there is a large supply of water underground cannot be doubted, there being an abundance in both streams above their point of junction, and indeed it is proved by the fact, that plenty of good water can and has been found in many places in both valleys, by sinking eight or ten feet.

In the Sonoita there is an unfailing supply of water of between 200 and 250 inches, which is largely increased during the rainy season. The Sonoita flows for about twenty-five miles, running for some two miles just before sinking through the rocky cañon, which averages from 60 to 150 feet wide, with perpendicular sides from 20 to 100 feet in height.

By building a dam of masonry across this cañon, about two miles above the Town of Calabasas, a large reservoir would be formed, capable of storing a sufficient amount of water, which, by a proper system of piping, would by itself supply the town.

The Santa Cruz River sinks about two and a half miles above the town and runs for some distance before sinking through a comparatively narrow valley hemmed in by low hills. Here it would be necessary to build a bed-rock dam, and bring the water down in pipes.

Although there is a good supply of water in both streams, it will be necessary to use great economy in its storing and distribution and use. Many of the smaller garden spots can be irrigated by wells and wind-mills, as there is always a good, fresh breeze in the valley. The cost of bringing in a supply of water from the Sonoita to the town will depend greatly on the material used and the cost of freight from the railroad. For a rough estimate I think a dam could be built and the water brought into town for about $12,000.

The land in these valleys, with proper irrigation, will prove very fruitful. The climate is all that can be asked for. There is an abundance of fire-wood on the adjacent hills; good pine wood and steam saw-mill within thirty miles; good mines in the immediate vicinity; a market both in Sonora and at the mines for everything that can be produced,

while it is the natural commercial point to supply Sonora with all she now imports from the United States.

Yours very respectfully, WM. S. EDWARDS.

The town site is on a gentle plateau formed by the junction of the Sonoita and Santa Cruz. It has for a distant background the

SUPERB SANTA RITA RANGE,

Mount Wrightson being visible at every point. Close by the bold and striking Sierra San Orgeante impinges to the north and east, while opposite. to the west, the Santa Cruz Valley broadens, and a lovely landscape is formed. Looking southward the Sonora ranges are outlined against the sky, while turning down the valley the eyes rest on the wild lines of the rugged Atascosa. Yet none of the Southern Arizona ranges are bleak or barren to the observer; all are grass-clad to their serrated summits.

A COMFORTABLE HOTEL

is in process of construction, contracts being already let for the building. It will be a fine two-story and basement structure of brick, with open verandahs, as befits climate; wide halls running through the building, and all modern appliances to insure comfort and coolness. The town is handsomely laid out with broad streets. Three finely located blocks have been set aside for parks, another block for school purposes, one for future county buildings, and one as an hotel block. Outside of the town-plat proper there will be laid out a large number of garden lots, bordering mainly on the Santa Cruz, of ample dimensions.

REPORT OF PROFESSOR J. N. PALMER UPON CALABASAS LAND GRANT.

TUCSON, ARIZONA TERRITORY, March 14, 1881.

THOMAS NICKERSON, Esq.—BOSTON, Mass.—Dear Sir:—In accordance with instructions of your letter of February 2, 1881, I have examined the *Calabasas Land Grant* and respectfully submit the following report for your consideration.

LOCATION.

The grant is situated in Pima County, Arizona Territory, about sixty-five (65) miles south of Tucson, the southern boundary line between the

United States and the State of Sonora, Old Mexico, and at an elevation of thirty-five hundred (3500) feet above sea level.

CLIMATE.

It is mild and pleasant. The mean temperature at Tucson for the summer of 1880 was 79° 6′ and for the winter of 1880 55° 3′, making an average mean temperature for the year of 67° 4′. Calabasas being one thousand (1000) feet higher than Tucson, you can readily perceive that there cannot be much difference in temperature between Tucson and Calabasas.

DESCRIPTION OF LAND.

The grant contains about fifty-one thousand (51,000) acres; ten thousand (10,000) acres being bottom or valley land, situated along the Valley of the Santa Cruz, and well adapted for farming purposes, the soil being a clay loam, and very productive when irrigated. The balance, forty-one thousand (41,000) acres, consists of low rolling hills, which produce sufficient grass for grazing and sustaining a large amount of stock.

WATER.

The Santa Cruz and Sonoita Creek are practically dry below the proposed points of taking the water out (for irrigating purposes) to within a distance of about twelve (12) miles of Tucson; but they will furnish quite a quantity of water for irrigating by constructing dams across the two streams, to secure the water and prevent escape and seepage through the loose sand. The dams must be built at a point or place where the water rises to the surface in the streams, in order to secure a supply.

The water in the above streams comes to the surface several miles from the town-site of Calabasas, and continues to flow to within a distance of the town of a mile and one-half in the Santa Cruz River, and of two miles in the Sonoita Creek. At these points the dams must be constructed, and the water taken out in main pipes for distributing. When the water is once carried over the intervening loose sand, between the source of supply and the land required to be irrigated, it can be distributed as desired.

I am confident, by this means, water enough can be secured to irrigate

at least one-half of the agricultural land. Many claim that there is sufficient to irrigate all of said land.

If these streams do not furnish a sufficient amount of water to irrigate all of the agricultural land, a supply can be obtained by sinking wells from fifteen to twenty-five feet deep in the bottom lands and pumping the water to the surface by windmills or steam power. All along under the valley land water appears to be plenty, as numerous wells have been sunk in different sections, between Calabasas and Tucson, and in no instance have they failed to find water within a short distance of the surface. In fact, single wells furnish sufficient amount of water to supply one thousand head of cattle, the water coming from the streams that sink and run beneath the surface.

PRODUCTION OF THE LAND.

When the bottom or valley land is brought under a system of irrigation and cultivated, it will produce splendid crops of corn, barley, oats and wheat.

At the present time such portions of said land where water comes near enough to the surface to produce moisture sufficient to sustain crops, are being cultivated, and producing largely of the above cereals. An abundance of fruit can be raised. Peaches, plums, pears, grapes and cherries, when cultivated, will grow and produce bountifully. In fact, peach and pear trees are now in bloom, which were planted by the Jesuits at their missions established at different places in this valley years ago.

STOCK RANGE.

The balance of the grant, comprising forty-one thousand (41,000) acres, consists of low rolling hills, which produce grass of a finer quality, and more nutritious than that which grows in the valley or bottom land, and of sufficient quantity to sustain large herds of cattle. It is in every way adapted for raising stock, and at the present time many head of cattle are grazing on this ranch.

WOOD, LUMBER AND BUILDING MATERIAL.

There is quite a quantity of mesquite and oak timber growing on the grant that will answer for fence-posts and fuel, but not of proper size to

manufacture into lumber, the trees growing low and of a scrubby character.

Should this land become settled and divided into farms, the wood on this grant would soon be consumed; but a sufficient quantity could be obtained for fuel for a long time from the mountains and surrounding country.

Lumber for building purposes must be transported, as none can be manufactured in the immediate vicinity.

Large quantities of red brick, of the best quality, can be, and are, manufactured from clay, which abounds on the grant. An abundance of limestone is found in the surrounding mountains, which is converted into good lime.

It will cost from $25,000 to $30,000 for pipes and construction of dams and ditches to conduct the water over the agricultural land, to make it available for individual enterprise or beneficial to the company. So long as this land remains in its present condition it cannot be expected that men of small means will seek it as an investment for farming or other purposes. Therefore, to develop this property, it must be undertaken by men who have, or can control, capital. Expenditures of money must be made to prove that the land can be irrigated and be made capable of producing crops, and to make such other improvements as may be necessary for an inducement to those seeking to purchase homes. By such method the land can be disposed of readily, which taken in connection with the Company, raising stock for Company account can be made a paying operation;

OR

a Company, by proper and careful management, can make it a paying investment by raising stock and farming the grant on a large scale.

In concluding my report of the *Calabasas Land Grant*, I would say that I have endeavored to present to you the facts as they seem to exist to me as a business proposition.

Respectfully yours, J. N. PALMER.

REPORT OF THOMAS L. ROGERS, ESQ., ON CALABASAS LAND GRANT.

TUCSON, A. T., Dec. 2, 1880.

THOS. NICKERSON, ESQ.- Dear Sir:—I have just returned from Sonora and a visit of inspection of the Calabasas Grant. The excursions over the tract were a continual and gratifying surprise. I had no idea that there was any such pleasant and fertile section in Southern Arizona. I found trees everywhere, and grass as high as a man's waist all over the valleys on the tract. In some places were small cultivated tracts; but not many settlers have taken up land because of the fact that they could not obtain a title to land. The Government would not receive their money, acting on the evidence that the land was on a grant, and not the Government's property to convey. Mr. Harris, the deputy surveyor, who made the survey, and who has been over all the grants in Arizona, says that this grant is by far the best, either for stock or for cultivation, in the Territory.

From the streams to the mountain sides the tract is everywhere good grazing ground. There are now, on small sections of it, about 5000 cattle and some herds of sheep and hogs. They are in the finest condition. As a stock range, alone, the tract is very valuable, and the best informed stock-men say there is ample pasturage outside of the farm land for 15,000 head of cattle.

This is a tract notable for timber. Along the stream the cottonwood prevails, mesquite and live oak are found abundant. The views of the tracts from high points are delightful and refreshing. The whole tract includes 52,000 acres of land. Of this number the surveyor estimates 12,000 acres are first-rate farming lands. He says that all of this land (the 12,000 acres) can be brought under irrigation.

There is "timber" enough for domestic use for years, by a large population. There is very little timber, however, that I should consider worth much for anything but fuel. Not much ought to be cut off in any event. The supply of fuel, however, would not be missed; for trees grow rapidly, to take the place of those that might be cut off, and only for about two months in a year is any fire needed here, except for cooking. On the part of the tract between the Santa Cruz and Potrero

Creek there is much mineral. Many promising claims have been located there.

WATER ON THE TRACT.

This is said to be the best watered region in Arizona south of Prescott. I gave particular attention to this matter during the week I was there, going out every day to some new water supply, and I found these facts:

1st, The Santa Cruz, which runs through the middle of the whole tract for eighteen miles, has *constant* water (a considerable stream), for seven miles *in* the grant. The Sonoita, nearly as large a stream as the Santa Cruz, runs for some miles through the eastern portion of the grant. The Potrero Creek (a smaller stream) runs two or three miles through the south-western part. On the west (off the tract) is Box Canon, where there might be stored a large supply. On the north-east in San Cuyatan Mountain are numerous living streams and springs. And *anywhere* on the level lands of the tract good water, in abundance, can be obtained at a depth of from twelve to thirty feet. It is hoped that artesian water (flowing) may be obtained. A well is now down six hundred feet, with good indications, but flowing water is not yet reached.

The surveyor says, that by a system of small reservoirs (narrow and deep) he is sure the *whole farming land* could be supplied with water. My own observations confirm his opinion. The Sonoita water, it is estimated, could be brought to the town-site for $15,000. The dam would be built about three miles from the town. The Santa Cruz water would have to be piped perhaps three miles. Box Canon water, if needed, would have to be brought six or eight miles. San Cuyatan water is within two miles of the town.

Nature has made the upper Santa Cruz Valley the garden of this region. Where the region is largely a desert, it is not saying much for this valley to call it the garden; but it can be easily made one of the most attractive and fertile sections in the United States. I was once of the opinion (commonly entertained) that Southern Arizona was only a dreary desert; but I had only seen the Gila Valley. Now I believe there is no fairer or more promising section, of equal extent, in our country. I presume you will think me too rosy in my picture; but I assure you that I cannot draw a picture which will convey to you any adequate idea of the beauty of the valley at and around the old hacienda of Gov. Gandara and at

Old Fort Mason, in Calabasas. No writer whom I have found has begun to portray the natural beauties of the country. I was charmed, and make no apology for being enthusiastic in my representation of the Santa Cruz Valley above Tubac. There may be serious drawbacks there, but if there are, I do not know what they are. They cannot be greater than pertain to other highly praised sections of our country. The uniform testimony of the people there is, that it is a delightful region to live in, both in summer and winter. Its importance as an agricultural, mineral and even commercial point will be apparent to any careful observer of its location and surroundings.

The highway from Tucson to Sonora passes through the whole length of the tract. The Sonora trade has built up Tucson. A large part of that trade can be centred in Calabasas, saving a journey of one hundred and twenty miles.

The town will also be, if reduction works should be erected there, second only to Denver as a bullion producer. Railroad communications with the East and Mexico (and the Pacific) will make it a health and a pleasure resort, both summer and winter. Such is the picture which my visit to the Upper Santa Cruz Valley presents to my mind. *Only* a visit could make me believe any such thing as I now do believe, and my visit compels me to write as I do. Whether you or anyone may believe it or not, I venture the prediction that a few years will find this section filled with a busy and prosperous community.

Yours very truly, THOS. L. ROGERS.

Turning from the real estate, attention is invited to the valuable

MINING PROPERTY OF THIS COMPANY,

that situated on the famous San Xavier Lode is the most extensive, and consists of the following mining locations, to wit: San Xavier, Western Extension of San Xavier, Patterson, Democrat, Arizona King, Arizona Queen, Veta, Banner, Warsaw and Spondulix, as shown by the annexed map. The lode is near the Papago Indian Reservation, in the Santa Cruz Valley, and almost immediately on the 32d parallel of latitude, and the 111th degree of west longitude. The situation is most accessible, being but eighteen miles south by west of Tucson, at which point the

road rises from the valley gradually across a gravelly *mesa*, or secondary mountain bench, covered by *cacti* and mesquite trees, and having a wide outlook in every direction. The small sierra, upon the southern face of which these mines are found, rises abruptly for three or four hundred feet from the table land or bench referred to already. It is a bold formation, singularly rugged in outline, not over two miles in either direction, being nearly as broad one way as the other, with each main front almost due east and west. Each location occupies fifteen hundred feet along the well-defined lode, except the Arizona Queen, that only being twelve hundred feet long, and all have a uniform width of six hundred feet. The reports herewith annexed will define with sufficient accuracy the character of the ore, and it is sufficient to add at this point the assays which have been made thereof for

THE SANTA RITA LAND AND MINING COMPANY.

The ores on the whole lode are of the same character, and thorough examination indicates equal richness. Among the experts who have reported on this lode is a well-known practical miner, Thomas Davis. He was at one time superintendent of the Bushell and St. Louis Mines, in the Santa Rita. Under date of April 20, 1877, Mr. Davis reported to Mr. Sykes that he had found a small shaft near the eastern end, "showing metal on all sides." Tracing the vein west, he found croppings which show "the same character of ore in abundance. From here on to the main shaft on the old San Xavier mine, a distance of perhaps six thousand feet, the vein shows in many places a heavy outcrop. The lode lies on a hill, isolated and running by itself; ore is found at the ends, on either side and all over it crops out in many places. Its situation makes it easily accessible. I have no hesitation in saying I can take ore enough out of this vein that is in sight to keep works running steadily for twenty-four months, at the rate of thirty-six tons daily, with but two weeks' start. Examining this ore, I find yellow and some green chloride of silver and red hematite of iron, containing perhaps some gold. From tests that have been made I am certain this whole body of ore will yield, by proper working, $60 per ton. For cheap working and immediate results with works properly handled I know of no property more desirable in this portion of Arizona."

W. W. THORNTON, MINING ENGINEER,

made in 1873 the following brief report to the former owner of the location:

"The San Xavier consists of argentiferous galena-carbonates. * * The result from reducing in Mexican furnace is 54 ounces of silver per ton, and 45 per cent. lead. From surface rock, assays made show gold, $9 to $19; silver, $62 78 to $400 per ton. Wood plentiful at from $2 to $3 per cord, with plenty of water available. * * I have stepped the ledge at ninety-seven yards. It is a perfect mountain of ore."

The altitude of the San Xavier Lode is about three thousand feet. The Santa Cruz Valley, or that portion of it lying between the mines and Tucson, contains one of the heaviest bodies of mesquite timber to be found in the Territory. This is a fact of great importance, as the charcoal made from this timber is admirably adapted for smelting purposes The location is a good one, both for present and future purposes. The nearest railroad point is now eighteen miles distant. The San Xavier Lode is within eighteen miles of Tucson, nine of the Mission Church, thirty from Tubac, forty from Calabasas.

REPORT OF LEWIS WILLIAMS, ENGINEER AND MINING EXPERT.

OFFICE OF BISBEE, WILLIAMS & CO.

San Francisco, Cal., Nov. 1877.

C. P. Sykes, Esq.—Dear Sir:—At your request I visited and examined the mining property which is situated in the San Xavier Mining District, Arizona, about eighteen miles almost due south of Tucson. The ride from the latter place to the mine is a very pleasant and picturesque one, over a hard, beautiful road, with a gradual grade all the way. I regret very much that so little has been done on the property in the way of development, but there is sufficient to demonstrate it to be a very fine prospect, and to give the strongest evidence of the existence of a large chimney or pipe of ore in the "C" shaft, indicated in the accompanying map. The character of the ore is argentiferous carbonates and sulphates

of lead of varied grades. The formation in which the ore body is found is lime, encased within granite. It is a belt of limestone, running in a north-easterly and south-westerly direction, of from 150 to 200 feet in width. On the surface the ore is capped with limestone of a rather hard character. The belt is very prominent, traversing the country, and traceable a considerable distance. This may be called the outcrop of the ledge.

The accompanying certificate of assay made by George Darwin, assayer of the Melrose Smelting and Refining Works, will show you the grade and quality of the ore taken out as sample from the "B" and "C" shafts.

The "B" shaft is down only ten feet, the ore being found in pockets, but looking well. It is sunk in ore of varied richness; the yellow carbonate which occurs only in pockets being the richest. The "C" shaft is sunk the depth of eighteen feet. The entire width of this shaft is in ore, yielding a product of different grades, for value of which also see certificate of assays. This ore is a very fine quality, of smelting character, and requiring very little iron as flux. Of this latter mineral there is sufficient in proximity to the San Xavier mines, which can be had very cheaply.

The distance from the mines to where the furnaces should be located is from seven to eight miles, with a gradual and easy grade the entire distance. Wood can be delivered at the furnace location at a cost not to exceed $2 50 per cord. Charcoal in unlimited quantity and good quality, made from the mesquite, can be bought at a cost of 20c per bushel. In all probability it can soon be had for 15c. Timber for building purposes can be purchased and delivered at the mine or furnace location at $100 per thousand feet. There is every probability of this price being lowered, as mills are to be erected to cut the pine timber found on the eastern slopes of the Santa Rita.

In conclusion, I would state that the mines are so located as to be cheaply worked. You are justified in holding them in high esteem, and the property offers a promising field for the legitimate investment of capital.

Yours respectfully,

LEWIS WILLIAMS.

ASSAYS.

MELROSE SMELTING AND REFINING COMPANY.

MELROSE, Cal., Nov. 6, 1877.

Return of silver and gold ore samples, deposited for assay by C. P. Sykes, Esq.:

ASSAYS NO	DEPOSITORS' MARK.	LEAD.	SILVER.	GOLD.	VALUE PER TON OF 2,000 lbs.
1	Selected from main ore body in "C" shaft.....	72 pr ct	$180 96	traces	$180 96
3	From average ore body (7 ft wide) do	58 pr ct	48 09	"	48 09
7	Selected sample yellow carbonate, in "B" shaft.....	.....	150 80	"	150 80
8	Average ore in do..	55 pr ct.	64 09	"	64 09

GEO. W. DARVIN, Assayer.

NEVADA METALLURGICAL WORKS.

SAN FRANCISCO, May 7, 1877.

C. P. SYKES, Esq., 240 Montgomery St., San Francisco:

Lot No. 1243. 1 box of ore marked "C" shaft, total weight, 121½ lbs; San Xavier Mine.

The whole was crushed, etc., and carefully sampled, and the average samples proved the ore to contain by assays (No. 6253):

Gold traces.
Silver, 55.89 ounces=$72 26 per ton of 2,000 lbs.
Lead, 50 3-10 per cent.

120 lbs of this ore was smelted with lime and iron, and the result was 732.64 ounces (Troy) of lead bullion, which carries 95 per cent. of lead, and is 004.4 fine in silver.

This shows that a ton of ore yields $68 40 in silver, and that the ore yielded 42.2 per cent., in lead.

The lead bullion produced is worth per ton of 2,000 lbs:

In silver.....$162 16
In lead..... 95 00*a*5c. per lb.

Total value of the bullion is.....$257 16 per ton.

It takes 2 tons 743 lbs of this class of ore to produce 1 ton of bullion of the above value (of $257 16 per ton).

HUHN & LUCKHARDT.

Later reports have been received by the San Xavier Mining and Smelting Company, which, as they bear directly upon mining property of the Santa Rita Land and Mining Company, are inserted here:

TUCSON, A. T., June 22, 1878.

D. W. F. BISBEE, ESQ., Pres. San Xavier Mining and Smelting Co., San Francisco, Cal.—Dear Sir:—Have visited the San Xavier Mine, and find that your superintendent, Mr. White, has done remarkably well in the prosecution of the work assigned him. "B" shaft, at the present working in the drift at incline, gives indications that the ore body which was left in sinking vertically, will be reached in a few days. "C" shaft is down about 60 feet; it has an inclination of 50 deg. to the south and east.

IT IS ALL IN ORE AND LOOKS VERY FINE.

The ore in the bottom of "C" shaft has materially changed in character; sulphurites having taken the place of the oxide and carbonates which predominated on and near the surface. You must not in the future compare the San Xavier ore with the Eureka Consolidated. It is not, but it is a fac-simile to the ore produced at the

WHITE AND SHILO MINES

in Nevada, possessing the requisite climate to work it *very* cheaply by the lixivation process. This process had been adopted by the White and Shilo Mining Company, and by many mines through Sonora, Mexico, where it gives the very best of satisfaction. *It pays well.* The ore of this class, when properly worked, is done at 25 to 50 per cent. less cost in the production of the precious metals than by smelting. In this process all the base metals are eliminated, and nothing but the silver and gold saved.

I do not consider the change in the character of the ore unfavorable to the mine, but to the contrary, it enhances the value. As greater depth is attained, and the water level approached, we may expect other changes in the character of the ore, and a much richer product in silver

gained. I have suggested to Mr. White, in his future operations at the mine, to adopt the system of following the ore wherever it may happen to lead. This course in the opening of the mine will keep him constantly in the ore body, and cost less to work. When the company are satisfied that they have a big mine, they can then more intelligently direct the sinking of vertical working shafts.

Yours very truly, LEWIS WILLIAMS.

From Mr. Edwards comes a later and closer survey

OF THE WHOLE PROPERTY.

TUCSON, A. T., June 26, 1878.

COL. C. P. SYKES, 32 Merchants Exchange, San Francisco, Cal.

Dear Sir:—In April, 1877, I made a general survey of the San Xavier Mines, distant about eighteen miles in a south-westerly direction from the city of Tucson, Pima County, Arizona Territory. The mines included in that survey were the Patterson, (sometimes called the Knoxville,) the San Xavier, the Western Extension of the San Xavier, the Arizona King, and the Arizona Queen. At that time I was very much taken with the prospects and value of the property, and have ever since watched with great interest the progress of work and developments, and have made several visits to the mines; the last, on the 21st of the present month, in company with Mr. Lewis Williams, of the firm of Bisbee, Williams & Co., Mining Engineers, San Francisco. We found everything working nicely and the mine much improved. Some time since a spur vein making from the western extension of the San Xavier to the south-west was located, and may now be considered as belonging to the same mineral deposit; this location is called the Democrat and shows well.

The country rock or formation is granite, although the body is accompanied by a well-defined belt of limestone some two or three hundred feet wide, and the vein is in places capped with this lime, though not sufficient to cause any material break in the croppings, which are traceable nearly the whole length of the claims, a distance of over one mile.

Map Showing
GROUP OF MINES
KNOWN AS
SAN XAVIER MINES.
PIMA COUNTY, ARIZONA Ty.
Photo-Electro. Co. Boston.
TRUE MERIDIAN. VA 13°E.
WARSAW.
BANNER.
SPONDULIX
PATTERSON.
VETA.
SAN XAVIER.
SAN XAVIER EXTENSION.
ARIZONA KING.
ARIZONA
QUEEN.
DEMOCRAT.
Shaft
Tunnel
Camp
1500 ft.
600 ft.
1166 ft.
Difference in Elevation bet A & B, 96 ft.
" " " A & C, 72 "

The principal workings are on the western end of the San Xavier and the eastern end of the "Western Extension;" but

THE HEAVIEST OUTCROP

is, in my opinion, about the junction of the Patterson and the San Xavier Mines. The developments of these mines are as follows: on the Patterson, one shaft toward the eastern end about twenty-five feet deep; one shaft toward the western end about ten feet deep. On the San Xavier, one shaft near the western end, about eighty feet deep; a couple of small holes about the centre of the claim; one on the eastern end of the claim, and one on tne western end. On the "Western Extension" there are three shafts on the eastern end of the claim, which have attained a depth of seventy-one, fifty-seven and twenty-three feet respectively. I mention this mine and its developments, as it is the centre of the group, and its developments virtually determine the value of the other locations.

On the Arizona Queen there is one shaft about the centre of the claim thirteen feet deep. On the Arizona King there are two shafts, each about ten feet deep. On the Democrat there are two shafts, the eastern one eleven feet deep; the western one, ten feet deep, and one cut about twelve feet long and ten feet deep. The openings on all the mines show more or less ore, and the deep shafts on the Patterson, San Xavier, and the Western Extension

HAVE PRODUCED ALL ORE,

with no waste material. Like all mines in Southern Arizona, the ore on the surface of the San Xavier Mines was more or less decomposed on the surface, and changed immediately with depth for the better, both in quantity and quality, and every indication of permanency. The developments on the San Xavier and Western Extension have demonstrated, beyond a reasonable doubt, the existence of a very large permanent body of ore of more than average richness, and a class that can be worked at a reasonable cost. It would be hard indeed to find a group of mines so favorably situated as the San Xavier are for economical working.

The accompanying sketch will serve to show the relative positions of these mines.

Yours very respectfully,

WM. S. EDWARDS.

DEVELOPMENTS.

The present developments upon the San Xavier group of mines consist of a shaft, known as Union shaft, sunk as a working shaft on the line between San Xavier and San Xavier Western Extension to the depth of 140 feet with a cross cut at 100 feet deep running south 120 feet, and north 117½ feet. The shaft is well timbered and in good shape. In sinking this shaft, at a depth of between 30 and 50 feet there were cut three small veins of high grade ore making off towards the main ore body. The company have never followed up these veins, preferring to wait until suitable reduction works were erected, and a general plan of development adopted. The character of the ores can be best understood by the following copy of assays made by the Superintendent from ore taken from the mines during the week ending January 11, 1879:

ASSAYS OF ORES FROM UNION SHAFT, SAN XAVIER MINES, JANUARY 11, 1879:—

	Lead.	Silver. Ounces.	Dollars in Silver.
No. 231	67½ per cent.	621.249	803.21
" 232	72½ "	839.999	1,086.02
" 233	70 "	1,093.749	1,412.10
" 234	71 "	64.166	82.96
" 235	57¼ "	134.166	173.46
" 236	63½ "	487.082	629.74
" 237	65½ "	148.749	192.31
" 238	47½ "	62.708	81.07
" 239	69 "	297.499	384.63
" 240	74 "	32.083	41.47
" 241	65¼ "	214.374	277.15
" 242	72½ "	933.332	1,206.70
" 243	75½ "	37.916	49.02
" 244	52¾ "	215.832	279.04
" 245	67 "	729.166	942.73
" 246	53 "	71.458	92.38
" 247	65¼ "	396.665	512.84
" 248	66¾ "	176.451	228.13
" 249	19 "	160.416	207.31

BEN. WILLIAMS, Assayer.

April 5th, 1879, the superintendent wrote as follows: "The south cross cut of the Union shaft has been driven in all up to date 20 feet, and to the north 21 feet, also a section eastward 4 feet. In the south cross cut we have cut several streaks of very rich ore averaging $400 silver per ton, I presume the same streaks as encountered in the shaft above." The inclination being about 50° to the south, it is very probable that the ore found in the south cross cut is the same as that found in the shaft at 40 feet deep from which the above assays are given. On the San Xavier there is an old Mexican shaft about 80 feet deep in which there are three feet of good ore, now exposed in drift. This shaft was worked several years since and the ore smelted in a Mexican furnace, and yielded as per Thornton's report 54 ounces of silver to the ton, and 45 per cent lead. The western extension of San Xavier has two shafts, one known as "B" shaft, 80 feet deep, and the other known as "C" shaft, about 200 feet deep, with 200 feet of cross cuts and levels, mostly in ore of an average value in silver, copper and lead of $50 per ton. There are several thousand tons of this ore now in sight, in the mine. There is also a prospecting tunnel driven on this claim 50 feet, with, at last accounts, favorable results. The company is at present sinking the "C" shaft upon this claim and opening up more ground. On this claim there have also been two holes bored with diamond drill, one about 200 feet, and one 400 feet deep, at a distance of 140 feet from either shaft. The 200 feet hole was bored with the formation and showed about the same class of ore as in "C" and "B" shafts. The 400 feet hole was sunk one hundred feet off the croppings and vertical. At 214 feet the ore body was reached, and the drill was in ore for 80 feet, when it passed through the formation, showing that the ore body at an angle of 50° was 80 feet thick. This ore was of an average higher grade than in "C" shaft. April 1st the drill was boring on San Xavier 200 feet east of Union shaft and at 140 feet deep in good ore. The Democrat has a prospecting tunnel that is now being run, and, May 1, 1880, was driven in the mountain about 80 feet with favorable indications of striking a ledge of copper ore. The Arizona Queen has a shaft sunk at or near the line of the Veta claim, and is now about 40 feet deep, and has been in ore all the way, and up to this date has great promise of good results. All the ore taken out of the shaft will average 20 per cent. copper and over $20 per ton silver. The better to show the value of the different kinds of ore selected from this shaft during

the progress of sinking in the month of February, 1881, the following copy of certificates of assays made by Prof. Arthur K. Brewer of Tucson is given.

CERTIFICATE OF ASSAY.

Arthur K. Brewer, Assay Office and Laboratory, corner Main and Pennington Streets, Tucson, A. T. Deposited by Col. C. P. Sykes, to be assayed for silver and gold, copper and lead.

February 3, 1881.

No.	Marks. ARIZONA QUEEN.	SILVER. Oz. pr ton.	SILVER. Val. pr ton.	GOLD. Oz. pr ton.	GOLD. Val. pr ton.	Tot. val. pr. ton.	Per cent. copper.	Per ct. Lead.
478	Croppings,	$4.86	$6.28	none		$6.28	37.5	Av.
477	Gray Copper,	31.60	40.85	"		40.85	37.0	6.0
480	Cryst. Quartz,	138.54	179.12	"		179.12	none	40.0
481	Oxide of Iron,	30.38	39.28	trace		39.28	"	——
483	Bottom of Shaft,	217.54	281.25	none		281.25	"	42.0

A. K. BREWER, Assayer.

February 9, 1881.

No.	Marks. ARIZONA QUEEN.	SILVER. Oz. pr ton.	SILVER. Val. pr ton.	GOLD. Oz. pr ton.	GOLD. Val. pr ton.	Tot. val. pr. ton.	Per cent. copper.	Per ct. lead.
502	Lead Ore,	552.95	$714.91	trace,		$714.91	——	——
503	Lead Ore, 2,	89.93	116.27	none,		116.27	——	26.0
505	Gray Copper,	33.05	42.73	"		42.73	30.0	——
507	Carbonate Copper,	0.73	0.94	"		0.94	41.0	——
508	Gray Copper,	9.72	12.57	"		12.57	33.5	——
509	Carb. of Copper Crop.,	none,		"		none,	32.0	——
510	Crystallized Quartz,	274.64	355.10	0.24	$5 02	360.12	——	——
511	Lead Ore,	20.66	26.71	none,		26-71	17.0	——

A. K. BREWER, Assayer.

February 17, 1881.

No.	Marks. ARIZONA QUEEN.	SILVER. Oz. pr ton.	SILVER. Val. pr ton.	GOLD. Oz. pr ton.	GOLD. Val. pr ton.	Tot. val. pr ton.	Per cent. copper.	Per ct. lead.
548	Lead Ore,	$561.46	$725.91	trace,		$725.91	——	53.0
550	Carb. of Copper,	——	——	——		——	27.8	——
555	Gray Copper,	none,	none,	none,		none,	36.0	——

A. K. BREWER, Assayer.

Under date of April 1st, 1881, a letter from the superintendent at Tucson, A. T., written to Col. C. P. Sykes, says that he "had just returned from the Arizona Queen mine, and mailed an average sample of

copper ore from a ten inch streak just struck in bottom of shaft. This is the best copper ore I have seen, and the mine looks well."

The following certificate of assays from the well known laboratory of Messrs. Lawrie and Terry will show the value of the copper ore above referred to.

CERTIFICATE OF ASSAY.

Laboratory, 19 Exchange Place, Boston, April 13, 1881.

Col. C. P. Sykes,—We hereby certify that we have examined the sample of "ore" marked as below, and find it to contain as follows:

Marked, "Arizona Queen." Percentage copper, 43.69. A trace of gold; no silver. Lawrie & Terry.

The shaft on this claim is sunk within two feet of the line of the Veta claim, practically proving that the ore body extends into that claim.

The Banner has a shaft about 12 deep and several surface cuts, from which have been taken out ten to twenty tons of ore that will average 12 per cent. copper, 20 per cent. lead, and $50 per ton in silver. The Arizona King, Patterson, Warsaw and Spondulix have only assessment work done on them, but all show the same bold formation croppings and surface indications.

THE BUENA VISTA MINE

is located about eighteen miles directly west of Tucson. The lode is one well known to the Mexicans, and has been worked more or less fitfully for many years past.

THE COMPANY'S SURVEYOR

reports as follows of this valuable mine:

Tucson, A. T., May 19, 1877.

Col. C. P. Sykes, 17 New Montgomery St., San Francisco, Cal.—Dear Sir:—According to your instructions of May 7, 1877, I made a general survey of the Buena Vista Mine, a plat of which I this day send you by mail.

This mine was located in January, 1877, under the U. S. Mining Laws of May 10, 1872, and is situated in what is known as the Sierra de Amale

Mining District, about twelve miles west of Tucson, County of Pima, Arizona Territory. In this same district, and about one and a half miles east of the

BUENA VISTA,

is also located the Nequilla Mine, patented to Lee & Scott in 1872. Sufficient work has been done in the Nequilla to demonstrate the permanency of the vein, and fine results have been obtained from the ore by the rudest methods of working. There are three springs in the district, which yield a small but permanent supply of water sufficient for drinking purposes, but nothing more. The one nearest to the mine is situated in the cañon, about three-quarters of a mile west of the shaft. The hills are covered with Palo Verde and a few mesquite trees. A good wagon road is constructed from Tucson to Lee & Scott's camp, distant about one mile from the Buena Vista. The Tucson Mountains lying between Tucson and the mines, causes the road to wind around their southern base, making the distance by the travelled road about eighteen miles from Tucson.

The Buena Vista Mine is located N. 82 deg. 45 min. W., and S. 82 deg. 45 min. E.: though I find the vein (as indicated by the walls) running N. 86 deg. W., and S. 86 deg. E.

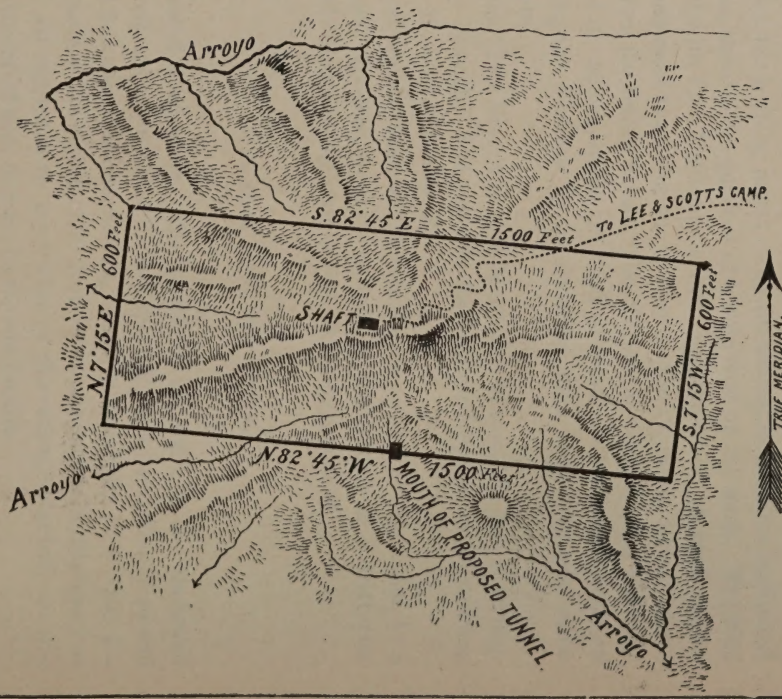
There is an incline sunk on the vein in the centre of the claim, to a depth of forty-five feet, from the bottom of which there is a drift, run in a westerly direction for sixteen feet, exposing a vein of

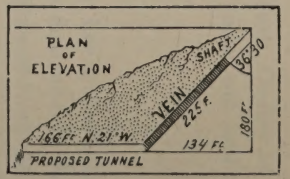
FINE ORE, FIVE FEET WIDE,

between well-defined walls. The mouth of the shaft is one thousand two hundred and twenty (1,220) feet above Tucson; seven hundred and fifty (750) feet above Lee & Scott's Camp, which bears S. 60 deg. E., and one hundred and eighty (180) feet above the southern boundary of the mine. By reference to the "Plan of Elevation," you will see the vein has a dip of 53 deg. 30 min. to the southward.

A tunnel commenced on the south boundary of the claim, at the head of the Arroyo, which runs to the southward, would have to run N. 21 deg. W., to connect with the present incline, and would strike the vein

PLAT OF THE BUENA VISTA MINE





at a distance of 166 feet from its mouth, and at a depth of 180 feet, and an actual distance of 225 feet from the mouth of the incline.

If you determine on a tunnel in this direction, I would advise going off the ground of the Buena Vista claim, further down the hill, some three hundred feet, as a wagon road might then, with little expense, be constructed to its mouth. But I think, by a more thorough prospecting of the ground, it might be found more advantageous to locate the main works further to the east of the present incline.

I examined a ridge coming into the Buena Vista Hill from the south-east, with a view to the construction of a wagon road between Lee & Scott's road and the Buena Vista Mine. I find this ridge offers a very good course for such a road. Its distance would be less than a mile, and with the outlay of a few hundred dollars, the mine could be placed in direct "wagon-road" communication with Tucson.

Respectfully yours, W. S. EDWARDS.

The following certificate of assays was made at the well-known

NEVADA METALLURGICAL WORKS OF SAN FRANCISCO.

SAN FRANCISCO, May 9, 1877.

C. P. SYKES, Esq., San Francisco.

Lot No. 1253, 1 small bag of ore; weight, 6 1-10 lbs, mark, "Buena Vista."

The whole was crushed and pulverized, and the average pulp samples proved the oar to contain by assays (6369)—gold traces; silver, $234 24 per ton; lead, 62½ per cent.

There were 6 1-10 lbs smelted with iron, little quartz and lime, and the result was 52.2 oz. of lead bullion, which was 97 per cent. in lead and 008.8 fine in silver.

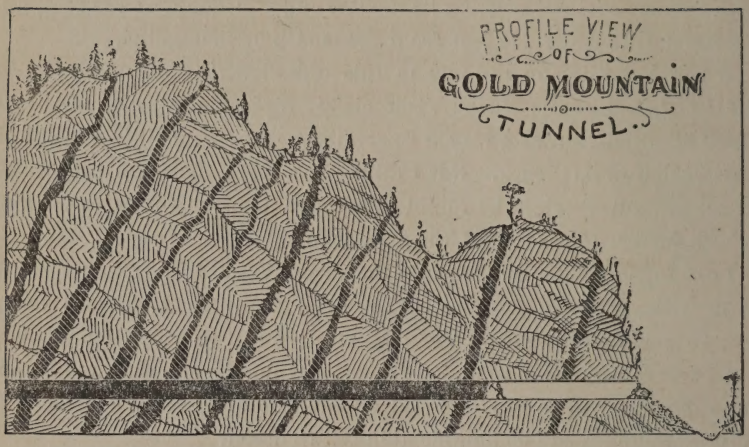
This shows that the ore yielded at the rate of 59.37 per cent. in lead, and also $213 11 per ton of 2,000 lbs in silver.

The lead bullion as produced is worth $325 67 per ton (2,000 lbs) in silver, and do. $97 in lead, at 5c per lb.

Total value of the lead bullion, $422 67 per ton.

In other words, it takes 1 ton and 1057 lbs of this class of ore to make 1 ton of bullion of the above value.

HUHN & LUCKHARDT.



THE GOLD MOUNTAIN TUNNEL

is located on Gold Mountain, about five miles south of Calabasas, and was driven into the mountain three hundred feet prior to April 1, 1881. At 180 feet a vein of argentiferous galena and quartz was cut, that shows very promising. The vein is three feet wide and selected ore assays from $15 to $60 per ton in gold, and from $12 to $40 in silver. This lode showed no value whatever on the surface, being conclusive evidence that, as greater depth is reached, better results can be expected. At a depth of about 400 feet in the tunnel it is expected to reach one of the main lodes (or veins) of the mountain, as upon the surface very favorable indications show, and there are old Mexican workings upon which trees have grown to a considerable size, showing that these mines were worked to some extent many years since. The work upon this Tunnel is being pushed forward night and day, and in the near future large returns are looked for, and confidently expected.

Aside from the immense value of the mines of the Santa Rita Land and Mining Company for gold, silver, copper and lead, there are large deposits of hematite and grey carbonate iron ores in the San Xavier group of mines that crops out upon the surface, and thousands of tons of good ore in sight. This is in itself a matter of great importance, as the growing demand for machinery in the Santa Cruz Valley section will soon require the manufacture of iron, which can be produced from the

ore of these mines, at less than the cost of transportation per ton from St. Louis, Mo., leaving a large margin of profit for smelting.

As a further proof of the value of this ore as a flux to use in smelting silver, lead and copper ores, and to manufacture into pig iron, the following certificate of assay is given:

BY PROF. ARTHUR K. BREWER,

Assay Office and Laboratory, corner of Main and Pennington Streets.

TUCSON, A. T., March 12, 1881.

Sample of ore deposited by Col. C. P. Sykes, to be assayed for gold, silver and iron. No. 686, marked iron ore from Arizona Queen. Silver, $6 28 per ton. Gold, none. Metallic iron 36 per cent.

ARTHUR K. BREWER, Assayer.

IMPROVEMENTS.

One 20 ton Water Jacket Furnace, with 30 horse-power engine and boiler and a No. 4½ Baker Blower, and the tools and implements for the use of said furnace for smelting copper, together with boarding-house and office all complete at furnace. The location of the furnace is on the surveyed line of the Arizona Southern Railroad on the Santa Cruz River, eight miles from San Xavier group of mines.

At the mines the company have a stone house (16x60) for boarding-house and office; blacksmith shop, with all the necessary tools and appliances for the use of a mining and a general business, a California horse-power hoisting machinery, all complete, together with all tools necessary to carry on a successful mining business. Water works, with two miles of pipe, to bring water to mines for sufficient use of the camp.

Diamond drill machinery, complete for boring to the depth of 1,000 feet. All of these implements are in good order, and by the addition to the present furnace plant of another jacket and blower, with a cupel and Reverberatory Furnace, at a cost not to exceed $15,000, the works will be in a condition to handle 50 tons of ore per day, and make the product into silver, copper and lead bullion ready for market.

POSSIBILITIES.

It is now certain that the Sonora Railroad will be built up the Magdalana Valley and reach the northern border of Mexico in the Santa Cruz Valley, within a few miles of Calabasas. The Atchison, Topeka and Santa Fe has made a connection with the Southern Pacific at Deming, and will in all probability be extended to a connection with the Sonora road. The Arizona Southern will probably be built during the year 1882 from Tucson to connect with the Sonora Road in the Santa Cruz Valley. It is now expected that these roads, making connections with Guaymas, Calabasas and Tucson, will all be completed within the year 1882. One at all familiar with the topography of Southern Arizona, together with the probabilities that these railroads are to be built, will readily see that it would require especial engineering skill to escape the Valley of the Santa Cruz, for such roads and their connections, while on the other hand there is everything in their favor to come there,—easy and natural grades, wood, good water, and plenty of it, and in the centre of one of the richest and most important mining sections of the world, which would furnish business for the roads. This adds especial interest to the value of the lands of this Company.

As shown by the map of the railroad system of the south-west as given in this report, it will bring the entire property of the Santa Rita Land and Mining Company in direct communication with the East, West, North and South, giving all the direct advantages growing out of competition in freights, and easy communication with the outside world. This fact established, the Santa Cruz Valley will be the home of a large and thriving population,—a fact that has long since been well understood by all writers that have ever visited this section of country, to which it is unnecessary to add any more evidence than can be found in this prospectus.

There are about 12,000 acres of the land of this Company that are adapted to the growing of any kind of grain, vegetables or fruit raised in semi-tropical countries, and it can be subdivided into small tracts and sold to suit purchasers; or by a proper system of irrigation, farmed on a large scale by the Company. It is estimated, by those best informed upon the subject of stock-raising, that from 15,000 to 20,000 head of cattle could be kept on the grazing land of this Company. This industry alone, prop-

ATLANTIC & PACIFIC R.R.
WINGATE
ALBUQUERQUE
SANTA FE
CALIFORNIA
NEW MEXICO
ARIZONA
MEXICO
TEXAS
CAMP VERDI
PRESCOTT
AUBREY
ST JOHNS
APACHE SPRING
COLTON
INDIO
LA PAZ
FLOWING WELL
SAN DIEGO
CALIFORNIA S. R.R.
SOCORRO
SAN MARCIAL
RINCON
PROPOSED
SOUTHERN PACIFIC R.R.
YUMA
STANWIX
ESTRELLA
CASA GRANDE
DESERT
LOWER CALIFORNIA
PACIFIC OCEAN
GULF OF CALIFORNIA
SAN JACINTO
SAN SIMON
ALTAR
CALABASAS
Tascoso Mts.
Santa Rita Mts.
Sierra Pajarito Mts.
Palanos Mts.
SANTA CRUZ
MAGDALENA
ARISPA
CRUCES
SONORA R.R.
HERMOSILLO
GUAYMAS
SAN IGNACIO
TUCSON
SAN PEDRO VALLEY
BENSON
WILCOX
SAN SIMON
DEMING
NEW MEXICO & SO. PACIFIC R.R.
CHARLESTON
TOMBSTONE
BISBEE
EL PASO DEL NORTE
MEXICAN CENTRAL R.R.
CHIHUAHUA
MAP SHOWING THE
RAILROAD SYSTEM
OF THE
SOUTHWEST.
AS CONNECTING WITH THE
SANTA CRUZ VALLEY
AND
CALABASAS, A.T.
PHOTO-ELECTROTYPE CO. BOSTON.

erly managed, can be made to pay from 8 to 10 per cent. upon the present valuation of the entire property, as it is a well-known fact that stock-raising in Southern California, Arizona and New Mexico is attended with less risk and a larger per cent. of profit than any other kind of legitimate business enterprises. Fully 10,000 acres of the land of this Company are susceptible of a high state of cultivation, and by irrigating will produce two crops a year and all the semi-tropical fruits, as well as all the cereals and vegetables grown in a more northern climate. The ten thousand acres of arable land are capable of producing 200,000 bushels of wheat and 400,000 bushels of corn per year, while the pasture lands are sufficient to sustain 20,000 head of cattle at all seasons of the year. Well stocked and cultivated, with the care of an Eastern farm, this property should turn off for market, at present prices of stock and grain in Arizona, an annual product of not less than $400,000 per annum, which, as a low estimate, should pay a net profit of $200,000 per annum. This is aside from fruits and vegetables, the former of which would take several years before bearing.

In order the better to manifest the interest taken in stock-raising, and the profits accruing therefrom, we copy from the *New York Times* of April 11, 1879, the account of an interview with P. T. Barnum on this subject:

"If you'll wait till Miss Jeal rides through the flaming hoops, and I make a little address to the audience," said P. T. Barnum, last night, "I'll tell you all about it." This remark was addressed to a *Times* reporter who had called on Mr. Barnum, at his "big show," on Third Av., to ask him about the consolidation of the Hermosilla and Huerfano Ranches in Colorado, which results in creating the most gigantic stock-raising enterprise in the world. Miss Jeal and her piebald horse rode through the hoops, and Mr. Barnum then went into the ring, and said his ring-master kept him, like an old Fourth-of-July cannon, to fire off whenever there was a big crowd gathered. Then he thanked the vast audience for their patronage, and, leaving the arena, took the reporter into his private office. The reporter said he wanted to know something about a large enterprise that Mr. Barnum was going into in Colorado, by which two great ranches were to be united. "I'm not going into it now," said the great showman; "I've been into it nearly ten years, and have only just got out of it—sit down, and I'll tell you all about it. I

have nothing to do with the Hermosilla Ranch, but about ten years ago myself and David W. Sherwood bought the Huerfano Ranch, which extends for about sixteen or seventeen miles on both banks of the Huerfano River, in Southern Colorado. The ranch is thirty-six miles from Pueblo, and contains, I think, between 15,000 and 17,000 acres of the very finest stock-raising land. Sherwood was a Bridgeport man, and a friend of mine, and was a cattle man—he knew all about raising cattle, and I didn't, but I had the money and was willing to put it into the speculation.

"We bought the ranch from Major George W. Schofield, of the regular army, a brother of Major Gen. Schofield, and we ran the place as a stock farm for nearly ten years, as I said. We bought some of the very best Kentucky bulls of the Durham breed, and some of the finest picked Texas cattle, and began to breed them together on a large scale. You know we never fed our cattle on any grain food at all, and the fact is the only expense we had to meet was the wages and keep of the herders and the men who looked after the ranch. Would you believe it, we raised oxen out there up till they were four years old, and were ready for the market, at a cost of $4 a head? Now, then, this Craig Ranch, or the Hermosilla Ranch, as it is called, belonged to Col. William Craig, and is a magnificent piece of property, running along the Huerfano River on both banks a distance of twenty-five or thirty miles, and it is immediately adjoining the other ranch I've just been telling you about. Well, Sherwood and myself ran that ranch of ours until about a year and a half ago, and we had about 5,000 or 6,000 head of cattle on it, and then Sherwood came to me and said he wanted to extend the business—he wanted to organize a stock company, get more land, and raise and sell more cattle. I didn't feel much like going into any stock company concern, so we proposed that one of us should sell out,—that he should buy my share of me, or I should buy his share of him. Very much to my amazement, he bought me out, and, although I had put the price up on him pretty high, he accepted it, and, of course, I had to let it go when he met me at my figures. However, as I say, he surprised me, but I didn't care much, as I don't care about having my grandchildren go out there to count calves.

"Sherwood, you see," continued Mr. Barnum, "was a pushing sort of man, had some financial backers, and took it. He has been at work ever since on this idea of his for a great stock-raising company, and organized

it under the name of the Colorado Cattle Company, and now they have bought, or are about to close the purchase of, this enormous Craig Ranch, to be added to the other. He has done it in conjunction with some friends he has picked up, and now some big fish have come into it and bought out some of the smaller holders, and it is in the hands of a few capitalists. You know Eastman, one of the cattle kings, is in it, and Mr. Vanderbilt, and, I believe, Mr. John B. Dutcher and Sherwood. I believe Sherwood has got a quarter interest in the whole thing. They are going to do an enormous business, but the main part of it is in the hands of Mr. Vanderbilt and his associates; the Vanderbilt capital is the main thing in it. They have got such an enormous place that they can raise cattle a good deal cheaper than I did, because they can put them into larger herds without being at much more expense for herders to tend them, and they'll probably raise oxen cattle there at $3 a head, that cost me $4. Then, too, they are going to sow a large part of it with grain crops so as to feed their cattle with a little corn. Instead of doing as I did, giving their cattle nothing whatever and getting $32 to $36 a head for them, they'll feed them a little grass or corn food and fatten them and get $55 to 65 a head for them. Were my cattle fit for the market? Oh, yes, they were in very good marketing condition, but you know when you can put a little meal into them it fattens them up splendidly, and makes them ready at once for home consumption. Corn has been raised for years on the Craig Ranch. You see he formerly had that ranch at a time when people went overland to the Pacific coast, and sold grain at that time to trains at $10 or $12 a bushel, and then again he used to sell large quantities to the Government for Indian supplies and for the use of the troops kept on the Plains and in the frontier forts.

"That was how the Major came into the business. He was formerly on the Plains as an old Indian fighter, saw the opportunity of the business, and went into it. In the old overland times Craig had to irrigate his land to raise grain, there being little or no rain in that country, and now this company is making arrangements to put several thousand acres of this land under water for the same purpose. They are already sending a lot of mills to grind the corn, and other machinery, from Bridgeport,—they sent out several car-loads only a few days ago. It is a wonderful piece of property that they own. You see they've got thirty or forty miles of land on both sides of the river now, and the Govern-

ment own about five hundred thousand acres of land lying directly behind this stock land, but this Government land is of no use to anybody unless they can get to the water, and that being the case, the Colorado Cattle Company virtually control it, and are the only persons who would care to buy the Government lands, as they own all the water rights that will ever be of benefit to the back lands. They've got a corner on the Government there, and that was our object also in getting both sides of the river."

In reply to an inquiry whether he had ever been out on those ranches, Mr. Barnum said: "I went out to see those ranches seven years ago, and slept two nights in an adobe hut on the earthern floor, and got a 'crick' in the back. The woman who kept the hut said as I was coming away, 'Well, Mr. Barnum, now you've got out here, I hope we shall see you out here again.' She was a nice, kind sort of a woman, and I said: 'Of course I shall, but I shall likely wait as long as I did this time before I come again. I'm sixty-one years old now, and if you're alive and well when I get out here again, I shall be one hundred and twenty-two years old.' However, I did go out again once afterward. You know Horace Greeley went out there some years ago, a few years before he died, and he said: 'This is a splendid country; you can raise an ox here about as cheap as you can raise a hen.' But," continued Mr. Barnum, "if you see Mr. Eastman, he can probably tell you more about it than I can. I don't know what prices have been paid at all."

The reporter informed Mr. Barnum that he had just been to Mr. Eastman's house, and that Mr. Eastman said that the announcement made in the evening papers concerning the purchase of the Craig Ranch was altogether premature—that he was not prepared to say anything about it.

Mr. Barnum pulled his own nose and quickly rejoined: "Well, if I'd known that I shouldn't have said anything about what I've been telling you. Of course, I didn't know that, and, as I saw a paragraph in an evening paper about it, I thought Mr. Eastman was himself making the facts public. It's too late for me to hold back now. If Mr. Eastman says the report is premature, it must be so, but I know that the whole matter is virtually arranged, and that if it is not completed, it is ready to be closed. As I tell you, they have been shipping machinery, and they have had their agents out there some time ago making a close examination into the title and the condition of the property, because, of

course, they didn't want to buy a pig in a bag. Mr. Vanderbilt and Mr. Eastman are, I understand, both pleasant gentleman, but, do you know, it's singular that I have never seen either of them? They are splendid business men, too, and so is Col. Craig. Craig is a splendid, noble fellow, six feet high, and a perfect gentleman, and I had him up to take dinner with me lately. I must go back into the show now, so you'll please excuse me; but there's one thing you may say, and that is that I've made more money raising cattle out there than I ever made in any other business except my show business. Good-night."

Just before visiting Mr. Barnum the reporter called on Mr. Eastman, at his residence, to ask for some details in respect to the purchase. Mr. Eastman said the announcements in the evening papers were premature. He said Mr. Barnum and Mr. Sherwood were interested in it and had been trying to organize a stock company to take the whole property, including both ranches. Mr. Sherwood was a Connecticut man, but had some years' experience in stock-raising. Col. Craig had had the ranch for seven or eight years, perhaps more, and had sold a great deal of corn off it to the Government for the Indian and army services.

Mr. Eastman, on being pressed as to whether Mr. Vanderbilt had any interest in the scheme, said, "I don't think Mr. Vanderbilt has anything to do with it. This announcement is premature; but we may take some interest in it." On being asked who he referred to as we—if he meant Mr. Vanderbilt—he said again that this matter was prematurely announced, that he didn't mean Mr. Vanderbilt, but that he meant himself and some other gentlemen interested in stock and stock-raising.

The current reports in regard to the matter are to the effect that the price paid for the Craig Ranch was $320,000, and that the farm covers an area of eighty-seven thousand acres, which, added to Huerfano Ranch, will give something over one hundred thousand acres, making it the largest single piece of farm land in the world. The company has already over ten thousand head of stock on the ranch, and propose increasing the stock to fifty thousand head at least. Mr. Vanderbilt and his immediate friends are said to own a controlling interest, and contemplate extending the beef and live stock trade into foreign markets, this having within a few years become a most important branch of the export trade, and showing still larger capabilities for enterprise. The New York Central Railroad Company now owns an extensive cattle yard at Kansas City,

and, it is said, will make this Colorado Cattle Company's lands the raising and feeding ground of the cattle they propose to ship to European and Eastern domestic markets.

THE VAST MERITS

of this Colorado enterprise need no expositor to men of insight and capital. They are patent on the surface. Of the immense sum of profits to be drawn from it, it is unnecessary to speak. The strongest evidence for that lies in the simple fact, that the ablest and most enterprising of our capitalists are so eager to embark in it with their personal influence, and so heavily with their capital. But the conditions for profitable investment which attach to the

SANTA RITA LAND AND MINING COMPANY

enterprise, herewith presented, are greatly superior to those of the other. This is self-evident on any careful inspection of the present scheme. The climate of Southern Arizona is milder and more equable, guaranteeing a perpetual summer. The soil is rich beyond the power of exhaustion. There is an unbroken succession of double annual crops. All the fruits of both the temperate and the tropical zones may be profitably produced. And, chief of all considerations, neither flocks nor herds require expensive housing or care. It is the perfection and ideal of agricultural occupation.

POLICY OF THE COMPANY.

It will be the policy of the Santa Rita Land and Mining Company, as soon as practical (in the first place), to follow the suggestions of Mr. Palmer, in his report; also that of Mr. Edwards, in making a system of water supply that will place the farming land in a condition for irrigation and cultivation, either to farm on a large scale, or cut up and sell in small parcels (as the directors may think best), and to stock the grazing land with a herd of cattle; and then to add to the present furnace facilities a water jacket and blower, a cupel and reverbatory furnace, so that

fifty tons of ore can be worked daily. And to this add sampling works, for the purchase of ores, with a view of increasing the capacity of smelting, and reduction works at, or near, Calabasas as early as the increase of the supply of ore will justify.

IN CONCLUSION.

The Santa Rita Land and Mining Company offer their valuable property to the public, in full knowledge of its importance. Investors will find in the market no more promising enterprise. The policy of the company will be of the most liberal character, as it is its deliberate design to induce settlement and promote development. The propositions of the company are in themselves sufficient to indicate a sound financial success. They present to the investor a new feature—a feature seldom connected with the formation of any mining enterprise. This is the

REAL ESTATE BASIS,

worth more than the cost of the stock purchased. The facts adduced as to the character of this section are sufficient to establish the claim that there will be a steady increase in the value of this whole property. Each year will see a larger population and more extensive improvements, and therefore each year will see the stock and property of this company grow in value. Besides fifty-one thousand acres of land in the Santa Cruz Valley, and one thousand lots in the town of Calabasas, there are eleven valuable mines and the Gold Mountain Tunnel, which wait only the combination of industry and capital to place their hidden treasures into the hands of stockholders. With this safe financial outlook, the company have no hesitancy in declaring that the public has never had a better prospect presented for a safe and remunerative investment. We therefore invite the most thorough examination, being confident of a favorable result. All information needed will be furnished, and all facilities will be extended by the company's financial agents,

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To Tubac, N.	12
" San Xavier Mines, N.	40
" Tucson, N.	60
" Camp Crittenden, E.	20
" Camp Bowie, E.	110
" Maricopa Wells, N.W.	158
" Yuma, W.	360
" Florence, N.	130
" Phenix, N.	185
" Presscott, N.	318
" San Diego, W.	527
" Silver City, E.	250
" Globe City, N.	125
" El Paso, Texas, E.	380
" Santa Fé, N.E.	750
" Mesillo, E.	406
" San Francisco, N.W.	1080
" St. Louis, Mo., E.	1500

	MILES.
To Sonora Line, S.	10
" Santa Rita Placers, N.E.	25
" Arivaca District, W.	15
" Oro Blanco District, W.	20
" Plancha la Plata, S.W.	20
" Cerro Colorado, W.	16
" Aztec District, N.E.	10
" Washington District, S.E.	20
" Tombstone District, E.	50
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" Altar, S.W.	80
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(Feb., 1891, 20,000)

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